JRC Scientific and Technical Reports

Scientific, Technical and Economic Committee for Fisheries (STECF)

Report of the SGMOS-09-05 Working Group Fishing Effort Regime

Part 3 Deep Sea and Western Waters

28 September – 2 October 2009, ISPRA, ITALY

Prepared in draft by

SGMOS-09-04: 25-30 May 2009, LISBON, PORTUGAL

and SGMOS-09-03: 13-17 July 2009, COPENHAGEN, DENMARK

Edited by Nick Bailey & Hans-Joachim Rätz

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The Scientific, Technical and Economic Committee for Fisheries (STECF) has been established by the European Commission. The STECF is being consulted at regular intervals on matters pertaining to the conservation and management of living aquatic resources, including biological, economic, environmental, social and technical considerations.

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SCIENTIFIC, TECHNICAL AND ECONOMIC COMMITTEE FOR FISHERIES (STECF)

STECF COMMENTS ON THE REPORT OF THE SGMOS-09-05 WORKING GROUP REPORT

28 SEPTEMBER – 2 OCTOBER 2009, ISPRA, ITALY

PREPARED IN DRAFT BY

SGMOS-09-04: 25 -30 MAY 2009, LISBON, PORTUGAL

and

SGMOS-09-03: 13 - 17 JULY 2009, COPENHAGEN, DENMARK

STECF UNDERTOOK THE REVIEW DURING THE PLENARY MEETING

HELD IN COPENHAGEN, DENMARK, 12-16 JULY 2010

1. BACKGROUND

STECF is requested to review the reports of the **SGMOS-09-05** of September, 2009 (ISPRA) meeting, evaluate the findings and make any appropriate comments and recommendations. Preliminary reviews were provided at the STECF autumn meeting 2009 (ref) and STECF spring meeting 2010 (ref) since the SGMOS group was at that time still finalising the three constituent reports.

The working group was requested for:

1 – an assessment of fishing effort deployed by fisheries and métiers which are currently affected by fishing effort management schemes defined in the Baltic Sea cod management plan R(EC) No 1098/2007 and in Annex II to Regulation (EC) No 43/2009;

2 – an assessment of fishing effort deployed by fisheries and métiers which will be affected by the extension of the cod recovery plan to the Celtic Sea

3 - Assessment of fishing effort and evaluation of management measures to be assessed in 2009 (Deep sea and Western Waters effort regime)

The STECF subgroup SGMOS Effort Management (previously SGRST) has since 2004, performed the task of collating and evaluating effort and catch data for fisheries operating under the Annex II A-C regimes. In 2009 SGMOS was asked to provide analysis according to the original cod recovery

plan and also the revised cod plan with its simplified gear categories. A significant management development in the new cod plan was the direct linking of effort management to achievement of fishing mortality targets. Crucial to this process was the establishment of effort baselines and an annual evaluation and adjustment of effort. The latter has brought the work of SGMOS into sharp focus and the effort material has become the subject of close scrutiny and debate. During 2009, ongoing discussions about a cod plan for the Celtic Sea led to a request for STECF to update the effort information first provided for this area in 2008. The 2009 STECF SGMOS effort meetings also evaluated effort and catches in the Baltic Sea and two other existing management regimes, namely the Western Waters Regulation and Deep Sea Regulation. In view of the requirement once again for evaluation of effort data, the group was well placed to deal with these. However, there were specific deep sea issues and questions involved in this work and suitable experts attended an additional meeting to deal with these.

TORs addressed by STECF SGMOS

The TORS given to SGMOS are listed in Annex I. Overall, the TOR list was extensive and demanding although STECF notes that the Commission acknowledgement that the Western waters and Deep Sea work represented a starting point for a longer term process and that it was unlikely that all questions would or could be answered immediately.

Approach adopted by Study Groups

The data call was issued on 16th March 2009 (corrigendum 19th March).

The Study Group met on three occasions in 2009. Inter-sessional work was carried out prior to the final meeting. STECF notes that data shortfalls and data revisions received throughout the process impaired the group's progress and restricted the time available for data synthesis and interpretation. Two significant updates involving Danish and French data were received and incorporated after the final meeting (in November and December respectively). A decision was taken not to incorporate data revisions received after the 9th December 2009 although STECF is aware that some member states made further submissions direct to the Commission after this date; these are not incorporated in the reports.

The group agreed that the extensive and diverse data and issues addressed would benefit from presentation in three reports covering respectively Baltic Sea (part 1) Annex II and the Celtic Sea (part 2) Deep Sea and Western Waters and (part 3). STECF notes that decisions were taken to streamline the material contained in the reports by adopting an area based presentation and by providing some of the material on the JRC website only.

Progress and Status of Reports

The report covering the Baltic Area (STECF SGMOS 09 05 Report part 1) was completed in January 2010 and reviewed by STECF by correspondence during March.

The report covering the Annex II effort management regime was completed in April 2010 and was reviewed at the April STECF plenary meeting

The Deep Sea and western Waters Report (Part 3) was completed in July 2010 and has been reviewed at this Plenary meeting. **The rest of this section refers only to The Deep Sea and Western Waters Report.**

2. TERMS OF REFERENCE:

Assessment of fishing effort and evaluation of management measures to be assessed in 2009 (Deep sea and Western Waters effort regime)

A) Deep sea access regime

Background

Council Regulation 2347/2002 established specific access requirements to fishing for deep-sea species, aiming at limiting fishing effort on deep-sea species at levels observed prior to that Regulation (1998 to 2000). In addition, the yearly overall maximum effort in terms of kilowatt-days has been fixed by annual decisions emanating from the December regulation on TACs & Quotas in order to comply with NEAFC provisions regarding the effort reduction policy within the Regulated area in international waters. The Commission presented an evaluation report on the management of deep sea fish stocks to the Council and the Parliament in 2007 (COM(2007)30). In this report, the Commission concluded on a number of steps to be taken in order to improve the access regime. In 2008 the European Parliament adopted a report that reflects on the access regime and the Commission's view on future development (A6-0103/2008). The Commission plans to propose amendments to the access regime in 2009, after stocktaking of Member State and stakeholder views and of scientific advice.

Detailed Request

STECF is asked to

1) in view of the management objective to target effort measures towards specific fisheries:

a) Related to maps[1] that show by ICES statistical rectangle the distribution of catch volumes (species in order of importance) and related effort volumes (per gear category): Define the deep-sea fisheries by analysing per year, including trends observed, at Community and Member State level, gears and related effort in kW-days catching in distinct areas the species listed in Annex I and II of Regulation 2347/2002. Analyse the catch composition observed by gear category including trends over recent years, catch per unit effort and, where possible, the likely level of discards. Comment on any fishing practices that can be identified as influencing the differences in catch composition from haul to haul. Can the species be grouped into target species and by-catch species in each fishery?

b) Advise on possible improvements to

the definition of data that Member States are obliged to send to the Commission in accordance with Article 9 of Regulation 2347/2002, with a view to improving the definition of deep-sea fisheries as undertaken under litera a);

other provisions of Regulation 2347/2202, in particular the one on the on-board observer coverage (Article 8).

1 As of end of March, it is planned that JRC will produce those maps prior to meeting.

2) in view of the management objective to define most relevant species of the deep-sea fisheries, to target effort measures towards specific fisheries, and to define the measures according to the conservation needs of the species,

Review the species lists of Annex I and II of Regulation 2347/2002 according to the following criteria:

a) In the fisheries identified, are there any other deep-sea species being caught in quantities that would merit their inclusion in Annex I or II? For example:*Physis spp.*; *Alepocephalus bairdii*.

b) Are any of the species listed in the annexes often or predominantly caught in fisheries that target non-deep sea species? If so, should they continue to be included in the list of deep-sea species in Annexes I or II?

c) Could the species listed in Annex I and II be grouped into:

species that based on their life history characteristics are particularly vulnerable to fishing and should therefore not be exploited

species that based on their life history characteristics are less vulnerable to fishing and could thus be sustainably exploited.

d) Following from the exercise described under point 1), could the species listed in Annex I and II be grouped according to target/by-catch species combining all fisheries observed?

3) See point 2 a) of the Western Waters part of the ToR. This point concerns deep sea and Western Waters regime likewise.

B) Western Waters access regime

Background

The Commission is held to review the Western Waters access regime in force since 2004, based on Regulations 1954/2003 and 1415/2004. The objective of the Western Waters access regime is to avoid an increase in fishing effort compared to recent levels (1998-2002), defined as overall effort directed towards demersal stocks, and effort on some benthic fisheries. A separate constraint on maximum effort levels within a special conservation zone, the so-called "Irish Box", is designed to accompany the restrictions on the use of demersal gears in that area, in view of the area's importance as a spawning and nursery ground, in particular for hake.

Detailed request

STECF is asked to

1) Concerning the functioning of the WW effort regime:

a) Aggregate at Member State and Community level fishing effort per year in kW-days and GT-days by demersal gear types, by vessel length >10m and >15m, and by ICES areas V to X and CECAF divisions 34.1.1, 34.1.2, 34.2.0; provide a description of yearly effort trends since 2000 per area, gear and main species composition, compare these aggregated data with effort ceilings established in Regulation 1415/2004 and with Member State data submissions to the Commission under Regulation 2104/2004.

b) Aggregate at Member State and Community level fishing effort directed towards scallops per year in kW-days and GT-days by gears and by vessel length >10m and >15m by ICES areas V to X and CECAF divisions 34.1.1, 34.1.2, 34.2.0; provide a description of yearly effort trends since 2000 per area and gear, compare these aggregated data with effort

ceilings established in Regulation 1415/2004 and with Member State data submissions to the Commission under Regulation 2104/2004.

c) Aggregate at Member State and Community level fishing effort directed towards edible crab and spider crab per year in kW-days and GT-days by gears and by vessel length >10m and >15m by ICES areas V to X and CECAF divisions 34.1.1, 34.1.2, 34.2.0; provide a description of yearly effort trends since 2000 per area and gear, compare these aggregated data with effort ceilings in Regulation 1415/2004 and with Member State data submissions to the Commission under Regulation 2104/2004.

d) Aggregate at Member State and Community level fishing effort per year in kW-days and GT-days by vessel length >10m and >15m and by

demersal gear types,

by gears catching scallops,

and by gears catching edible crab as well as spider crab,

in the Biologically Sensitive Area as defined in Article 6 of Regulation 1954/2003; provide a description of effort trends since 2000 in this area, compare these aggregated data with effort ceilings established in Regulation 1415/2004 and with Member State data submissions to the Commission under Regulation 2104/2004.

2) Concerning the definition of the WW effort regime:

a) Assess the definition of the WW effort restrictions in the context of overlapping or neighbouring effort regimes, in particular the deep sea access regime (Regulation 2347/2002), the cod plan (Regulation 1342/2008), the Southern hake plan (Regulation 2166/2005) and the Western Channel sole plan (Regulation 509/2007). In particular:

The present Western Waters regime aims at excluding fisheries directed towards deep-sea species. Discuss possible alternative criteria for the delimitation of both regimes (e.g. according to the depth of the waters in which the vessels operate or according to catch composition) or specific rules for addressing vessels that catch both deep sea species and other species;

Discuss possible redefinition of the scope of Western Waters effort restrictions in areas where fishing effort is restricted by the cod plan (VI a, V b, VII a);

b) Evaluate the precision of the definition in Regulations 1954/2003 and 1415/2004 of "fishing effort" in terms of area, time, and fishing pattern;

c) Evaluate whether fishing effort defined in GT-days or in kW-days is better correlated to the fishing mortality on edible crab and spider crab;

d) Assess possible reasons for excluding gears directed towards pelagic fisheries from the regime, in particular whether effort restrictions for pelagic fisheries in those areas might be less correlated to fishing mortalities than effort restrictions for demersal fisheries.

3) Concerning the possible evolution of the WW effort regime

a) Describe in a standardised way at Community level the characteristics of the demersal fisheries by main effort (by overall amount in kW-days and by gear category according to DCR) and main quota species (by catch volume), per ICES division in areas V to X and in CECAF 34.1.1, 34.1.2, 34.2.0, for the years 2005 to 2008;

b) Assess the relationship between the development of demersal effort in these areas and the development of TACs of main demersal species abundant in those areas, for the years 2005 to 2008.

3. STECF COMMENTS AND CONCLUSIONS

General comments and conclusions on data availability are followed by those specific to Deep Sea and Western Waters issues.

- STECF notes that the work of SGMOS is to collate and summarise data provided by member states. In this respect the output is dependent on timely submission of accurate material and STECF SGMOS is only able to provide an output which reflects the quality of these data. While every effort is made to accommodate updates and revisions from member states, it is not possible to capture all of these in the finalised reports.
- STECF notes that comprehensive deep sea data has been provided by a number of countries representing a significant new development in the work of SGMOS. STECF also notes, however, that deep sea and western waters effort data from some countries was either not supplied or was incomplete or inaccurate. Shortfalls were most evident in the data from France and Spain and given the prominence of these countries in the areas covered by both control Regulations, these shortfalls render the aggregate data uncertain.
- STECF notes that, so far, the data available on deep sea species is mainly restricted to landings information. To gain a true perception of removals from these fisheries, catch data are required. In principle observer data should be available since the regulation requires member states to sample these species on board commercial vessels and STECF notes that such data was not provided.
- In view of the repeated experience of late and inconsistent data reports received from some Member States, STECF considers that continuing efforts by the Commission will be required to inform and educate national administrations on the required procedures, timescales and quality of data submissions.
- Given the difficulties created, STECF particularly acknowledges the major contribution made by Hans-Joachim Rätz of the JRC in developing, maintaining and uploading data to the various databases. The incorporation of extensive new data covering deep sea and western waters was a time consuming and demanding task carried out efficiently and in good time for the various SGMOS meetings.
- STECF would like to draw attention to the question of resources being applied to the exercise of compiling and analysing effort and catch data. This involves considerably more work for JRC and Member States' scientists than implied by the time formally scheduled for the meetings. STECF requests that participating experts provide an estimate of the following to illustrate the full resource cost: i) time allocated to this work and ii) extent to which some of the detailed material is actually used and iii) scope for improved procedures.
- STECF strongly recommends that the Commission establish a more permanent basis for the future resourcing and support of existing and future databases holding the effort and catch information and also ensure that the issue of successional planning is adequately addressed. STECF also recommends that more transparent arrangements for access to and use of data are discussed, formally agreed and publicised.

Specific comments Part 3 Deep Sea and Western Waters

- STECF notes that part 3 of the STECF SGMOS report, covering Deep Sea and Western Waters of SGMOS has been finalised. This is the first time an evaluation has been carried out of effort development under the DeepSea and Western Waters regimes.
- STECF notes that a considerable amount of information has been collated covering the Deep Sea Regulation and the Western Waters Regulation but that there is uncertainty over some of the quantitative information from countries with very significant fisheries in these areas.
- STECF considers that the work should be regarded as preliminary at this stage and recommends that the quantitative information on effort and catches should not be taken as a representation of the true situation.
- Notwithstanding the above comments, STECF considers that some general observations made by SGMOS and summarised in its report are useful but would benefit from further scrutiny and comment from deep sea experts. STECF notes that such experts attended the second SGMOS effort meeting in 2009 but owing to the lack of finalised data at that time were mainly involved in more strategic questions (see below).
- STECF notes that discussion of the definition of Deep Sea fisheries is continuing and that the present approach, based mainly on quantities of deep sea species landed, should be regarded as an interim solution.
- STECF observes that good progress was made in the review of Annex I and Annex II species and recommends that the adjustments proposed are incorporated in a future revision of the deep sea regulation (Council Regulation (EC) 2347/2002).
- STECF notes that the report contains a short general discussion on the exploitation and vulnerability of deep sea species which attempts to address TOR 2 c dealing with the question about whether some species should not be exploited. STECF agrees with SGMOS that there are no scientific reasons why these species should not be exploited but also strongly agrees with the subgroup that this should be on the condition that the exploitation rate is sustainable.

Update on STECF SGMOS Effort Management Review SGMOS-10-04

- STECF notes that good progress has been made in the collation of data at the first meeting of the SG effort management group. The majority of countries have supplied effort, catch and spatial effort data as per the data call. Some updates have occurred since the first meeting. Data submissions are still required from Belgium and France and questions remain over the data from Spain. It is hoped that these shortfalls will be rectified in good time for the second meeting.
- In order to support the STECF SGMOS and JRC efforts to secure all the relevant information from these countries in time for the second meeting, STECF considers that a reminder from the Commission may prove helpful.
- STECF encourages the analysis and further development of the deep sea and western waters data and recognises that deep sea expertise will be required to fully exploit the new data resource created. STECF proposes that deep sea experts to be invited to the second effort meeting in 2010 to assist with interpretation of the information collated.

STECF/SGMOS-09-05 WORKING GROUP REPORT
ON ASSESSMENT OF FISHING EFFORT REGIME
PART 3 DEEP SEA AND WESTERN WATERS

ISPRA ITALY, 28 SEPTEMBER – 2 OCTOBER 2009
PREPARED IN DRAFT BY
STECF/SGMOS-09-04: 25-30 MAY 2009, LISBON, PORTUGAL
and
STECF/SGMOS-09-03, 13-17 JULY 2009, COPENHAGEN, DENMARK

This report does not necessarily reflect the view of the European Commission and in no way anticipates the Commission's future policy in this area

1. SUMMARY OF FINDINGS FOR DEEP SEA AND WESTERN WATERS

General remarks

STECF SGMOS Summary of main observations and findings from SGMOS-09-05 concerning Deep Sea and Western Waters

General remarks

- The work of SGMOS is to collate and summarise data provided by member states. In this respect the output is dependent on timely submission of accurate material and STECF SGMOS is only able to provide an output which reflects the quality of these data. While every effort is made to accommodate updates and revisions from member states, it is not possible to capture all of these in the finalised reports.
- A comprehensive deep sea data has been provided by a number of countries representing a significant new development in the work of SGMOS. However, the deep sea and western waters effort data from some countries was either not supplied or was incomplete or inaccurate. Shortfalls were most evident in the data from France and Spain and given the prominence of these countries in the areas covered by both control Regulations, render the aggregate data uncertain.
- So far, the data available on deep sea species is mainly restricted to landings information. To gain a true perception of removals from these fisheries, catch data are required.

Review of Deep Sea and Western Waters effort Regimes

- STECF SGMOS provided, for the first time, an evaluation of deep sea and western waters effort and catches. This should be regarded as a work in progress and experiences gained during this first evaluation will inform subsequent developments in approach and presentation.
- TORs were partially achieved by SGMOS but there was insufficient time to address quite a number of the specific questions.
- Generic comments relating to the preparation of data for SGMOS apply to the Deep Sea evaluation and contributed significantly to the delay
- The first TOR implied that deep sea data supplied by Member States directly to the Commission under the requirements of the Deep Sea Regulation 2347/2002 could be used as part of the evaluation. In practise the information was either absent or of poor quality and so was of limited use.
- SGMOS discussed definitions for what should constitute Deep Sea activity. Several options were identified and it was felt that the definition embedded in the Regulation is not necessarily the most appropriate. A ‘decision tree’ approach has been employed for the present the most appropriate. Discussions of approaches using bathymetric data linked to VMS were considered for future development.
- STECF SGMOS presented effort trends for each member state and gear by ICES (and CECAF) areas. The general position is that effort in a number of gears (particularly otter

trawls) and countries has declined in recent years. This is most evident in the most northerly areas. Increases in the effort of longliners have occurred in a number of areas.

- SGMOS also presented information on catches and catch composition. This is very detailed but in general shows reductions in the landings of a number of species across the range of areas reported. One exception is the landings of certain deep water sharks in the more southerly ICES areas.
- A detailed review of the Annex I and II lists of species was provided by the group with recommendations for some adjustments when the Regulation is reviewed.
- STECF SGMOS had insufficient time adequately to consider overlaps with other effort regimes and encountered difficulties in interpreting the Western Waters effort information where some very aberrant numbers were generated for some member states.

2. INTRODUCTION

2.1. Terms of Reference

Assessment of fishing effort and evaluation of management measures to be assessed in 2009 (Deep sea and Western Waters effort regime)

A) Deep sea access regime

Background

Council Regulation 2347/2002 established specific access requirements to fishing for deep-sea species, aiming at limiting fishing effort on deep-sea species at levels observed prior to that Regulation (1998 to 2000). In addition, the yearly overall maximum effort in terms of kilowatt-days has been fixed by annual decisions emanating from the December regulation on TACs & Quotas in order to comply with NEAFC provisions regarding the effort reduction policy within the Regulated area in international waters. The Commission presented an evaluation report on the management of deep sea fish stocks to the Council and the Parliament in 2007 (COM(2007)30). In this report, the Commission concluded on a number of steps to be taken in order to improve the access regime. In 2008 the European Parliament adopted a report that reflects on the access regime and the Commission's view on future development (A6-0103/2008). The Commission plans to propose amendments to the access regime in 2009, after stocktaking of Member State and stakeholder views and of scientific advice.

Detailed Request

STECF is asked to

1) in view of the management objective to target effort measures towards specific fisheries:

a) Related to maps[2] that show by ICES statistical rectangle the distribution of catch volumes (species in order of importance) and related effort volumes (per gear category): Define the deep-sea fisheries by analysing per year, including trends observed, at Community and Member State level, gears and related effort in kW-days catching in distinct areas the species listed in Annex I and II of Regulation 2347/2002. Analyse the catch composition observed by gear category including trends over recent years, catch per unit effort and, where possible, the likely level of discards. Comment on any fishing practices that can be identified as influencing the differences in catch composition from haul to haul. Can the species be grouped into target species and by-catch species in each fishery?

b) Advise on possible improvements to

the definition of data that Member States are obliged to send to the Commission in accordance with Article 9 of Regulation 2347/2002, with a view to improving the definition of deep-sea fisheries as undertaken under litera a);

other provisions of Regulation 2347/2202, in particular the one on the on-board observer coverage (Article 8).

2) in view of the management objective to define most relevant species of the deep-sea fisheries, to target effort measures towards specific fisheries, and to define the measures according to the conservation needs of the species,

2 As of end of March, it is planned that JRC will produce those maps prior to meeting.

Review the species lists of Annex I and II of Regulation 2347/2002 according to the following criteria:

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b) Are any of the species listed in the annexes often or predominantly caught in fisheries that target non-deep sea species? If so, should they continue to be included in the list of deep-sea species in Annexes I or II?

c) Could the species listed in Annex I and II be grouped into:

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species that based on their life history characteristics are less vulnerable to fishing and could thus be sustainably exploited.

d) Following from the exercise described under point 1), could the species listed in Annex I and II be grouped according to target/by-catch species combining all fisheries observed?

3) See point 2 a) of the Western Waters part of the ToR. This point concerns deep sea and Western Waters regime likewise.

B) Western Waters access regime

Background

The Commission is held to review the Western Waters access regime in force since 2004, based on Regulations 1954/2003 and 1415/2004. The objective of the Western Waters access regime is to avoid an increase in fishing effort compared to recent levels (1998-2002), defined as overall effort directed towards demersal stocks, and effort on some benthic fisheries. A separate constraint on maximum effort levels within a special conservation zone, the so-called "Irish Box", is designed to accompany the restrictions on the use of demersal gears in that area, in view of the area's importance as a spawning and nursery ground, in particular for hake.

Detailed request

STECF is asked to

1) Concerning the functioning of the WW effort regime:

a) Aggregate at Member State and Community level fishing effort per year in kW-days and GT-days by demersal gear types, by vessel length >10m and >15m, and by ICES areas V to X and CECAF divisions 34.1.1, 34.1.2, 34.2.0; provide a description of yearly effort trends since 2000 per area, gear and main species composition, compare these aggregated data with effort ceilings established in Regulation 1415/2004 and with Member State data submissions to the Commission under Regulation 2104/2004.

b) Aggregate at Member State and Community level fishing effort directed towards scallops per year in kW-days and GT-days by gears and by vessel length >10m and >15m by ICES areas V to X and CECAF divisions 34.1.1, 34.1.2, 34.2.0; provide a description of yearly effort trends since 2000 per area and gear, compare these aggregated data with effort ceilings established in Regulation 1415/2004 and with Member State data submissions to the Commission under Regulation 2104/2004.

c) Aggregate at Member State and Community level fishing effort directed towards edible crab and spider crab per year in kW-days and GT-days by gears and by vessel length >10m and >15m by ICES areas V to X and CECAF divisions 34.1.1, 34.1.2, 34.2.0; provide a description of yearly effort trends since 2000 per area and gear, compare these aggregated data with effort ceilings in Regulation 1415/2004 and with Member State data submissions to the Commission under Regulation 2104/2004.

d) Aggregate at Member State and Community level fishing effort per year in kW-days and GT-days by vessel length >10m and >15m and by

demersal gear types,

by gears catching scallops,

and by gears catching edible crab as well as spider crab,

in the Biologically Sensitive Area as defined in Article 6 of Regulation 1954/2003; provide a description of effort trends since 2000 in this area, compare these aggregated data with effort ceilings established in Regulation 1415/2004 and with Member State data submissions to the Commission under Regulation 2104/2004.

2) Concerning the definition of the WW effort regime:

a) Assess the definition of the WW effort restrictions in the context of overlapping or neighbouring effort regimes, in particular the deep sea access regime (Regulation 2347/2002), the cod plan (Regulation 1342/2008), the Southern hake plan (Regulation 2166/2005) and the Western Channel sole plan (Regulation 509/2007). In particular:

The present Western Waters regime aims at excluding fisheries directed towards deep-sea species. Discuss possible alternative criteria for the delimitation of both regimes (e.g. according to the depth of the waters in which the vessels operate or according to catch composition) or specific rules for addressing vessels that catch both deep sea species and other species;

Discuss possible redefinition of the scope of Western Waters effort restrictions in areas where fishing effort is restricted by the cod plan (VI a, V b, VII a);

b) Evaluate the precision of the definition in Regulations 1954/2003 and 1415/2004 of "fishing effort" in terms of area, time, and fishing pattern;

c) Evaluate whether fishing effort defined in GT-days or in kW-days is better correlated to the fishing mortality on edible crab and spider crab;

d) Assess possible reasons for excluding gears directed towards pelagic fisheries from the regime, in particular whether effort restrictions for pelagic fisheries in those areas might be less correlated to fishing mortalities than effort restrictions for demersal fisheries.

3) Concerning the possible evolution of the WW effort regime

a) Describe in a standardised way at Community level the characteristics of the demersal fisheries by main effort (by overall amount in kW-days and by gear category according to DCR) and main quota species (by catch volume), per ICES division in areas V to X and in CECAF 34.1.1, 34.1.2, 34.2.0, for the years 2005 to 2008;

b) Assess the relationship between the development of demersal effort in these areas and the development of TACs of main demersal species abundant in those areas, for the years 2005 to 2008.

2.2. Participants

In 2007, STECF and its subgroups adopted a new working style with stakeholder involvement as observers to improve transparency in scientific evaluations. Observers were invited to comment on the TORs and related analyses and results. The stakeholder involvement was in accordance with the protocol for STECF meetings observers, Brussels, 20 September 2006.

Experience during the 2009 meeting again showed that representatives of stakeholder organisations (first meeting in Lisbon) were very interested in the evaluation of the basic information regarding the trends in fleet specific information and specific data deficiencies. Contributions took the form of

constructive questions and clarifying comments mainly focussed on recent experience of fishing activity by different fleets.

Participants of the 3 meetings are grouped by STECF members, invited experts, JRC experts, stakeholder, and EU-Commission representatives and are listed in Appendix I.

Note that for the second meeting, regular SGMOS participation was augmented by experts in Deep Sea biology who made valuable contributions in areas beyond the expertise normally present.

2.3. Data Call

On 16 March 2009 the Commission DG Mare invited the relevant institutes to electronically submit fleet specific catch and effort data no later than 17 April 2009. A corrigendum was issued on 19th March 2009.

The call was based on the previous Annexes and also the new cod recovery plan Annex and included specific requests covering areas covered by the Deep Sea and Western Waters Regulations

Given the repeated experience of late and inconsistent data reports received from Member States, STECF-SGMOS reiterates its recommendation that the task of European fleet specific data compilations of nominal effort and catch continues to be improved and further institutionalised and conducted on a routine basis.

2.4. Data policy, formats and availability

Originally, the catch and effort data base structures used by STECF-SGMOS were developed by the ICES Study Group on the Development of Fishery-based Forecasts (ICES CM 2004/ACFM:11, 41 pp.) with few amendments required for the review of fishery regulations. The format of the fleet specific data on catches including discards and effort is given in Annex 1 of Part II of the effort report. The format has been almost unchanged compared to the data bases compiled during earlier STECF subgroup meetings dealing with cod recovery or mixed fisheries reviews. Fields allowing for the attachment of special conditions have been adapted to accommodate the development of new management measures. To identify Deep Sea activity a specon was added to appropriate trips (see below).

2.4.1. Data policy

Experts reported a continued use of the data by STECF-SGMOS but with the required permission for any use by other scientific or non-scientific groups. In the case of the Deep Sea and Western Waters data, the uncertainties surrounding some of the submissions and the fact that the process of effectively defining Deep Sea effort is still being developed means that these data are subject to significant change. This implies that national experts need to be contacted for their consent before granting access to the data. However, Denmark and Portugal reserves the right of the deletion of the national data on request.

JRC requests to be informed about applications of data access and their notifications.

2.4.2. Nominal Deep Sea and Western Waters effort and catch data in 2000-2008

The provision of information on effort and catches concerning Deep Sea and Western Waters was supplied to SGMOS in the context of the wider data call concerning the Baltic and Annex II effort evaluations.

The fleet aggregation according to the derogations (gear group, mesh size and management area) defined in Annexes IIA-C or aggregation according to the revised cod plan is within the competence of the Member States' institutes. While every attempt is made to encourage a consistent approach, some differences between countries due to availability of essential information, different interpretations and/or different expertise to manage the extensive databases is known to occur. A number of Member States invested additional time in improving their data submissions and the overall quality is believed to have improved. However, the new requirements to provide Deep Sea and Western Waters effort data have raised new issues and it is expected that these will take a while to resolve.

This is the first time that an attempt has been made to collate Deep Sea and Western Waters effort and from the outset was seen as a first step towards providing comprehensive information. Some good progress was made but data provided by several countries was questionable, incomplete or absent altogether. **AS A CONSEQUENCE THE RESULTS PRESENTED HERE SHOULD BE TREATED AS HIGHLY PROVISIONAL AND SUBJECT TO CONSIDERABLE FUTURE AMENDMENTS – PARTICULARLY THE WESTERN WATERS EFFORT INFORMATION.**

3. DEEP SEA ACCESS REGIME

3.1. Introduction

Details of the Deep Sea Regulations can be found in COUNCIL REGULATION (EC) No 2347/2002.

The format for presenting Deep Sea information was discussed during the July SGMOS meeting when experts with particular knowledge were present. It was agreed that the most useful presentation would be data summarised on a regional approach so as to identify geographic differences in effort distribution by key member states and important gears. It was decided that for a first evaluation, regions based on ICES areas would be adopted. It may be the case that similarities between some of these areas allows areas to be combined in future summaries. Where an ICES area contained waters within EU jurisdiction and waters outside of this, separate summaries are provided where data allow.

So as to provide a more complete and self contained picture of activities in each of the regions, it was also agreed that information on catches of different deep sea species would be presented alongside the effort data. It is hoped this will facilitate the reader in identifying key features and trends.

The absence of completed datasets by the July meeting meant that the deep sea experts were not able to provide input at that time on some of the regional observations. Most data were complete by the September SGMOS meeting but analysis of other elements of the TORs meant that little time was available for consideration of deep sea issues. In fact, final data revisions were made as late as December 2009 and the tables and figures of this report updated in January. The limited text associated with this material has been compiled by the SGMOS chairman with valuable input from those experts present at the SGMOS meetings working at the same institute.

Data on catches are restricted to the Annex I species as shown in Table 3.1.1.

Table 3.1.1: Annex I species list

Code	annex	Common Name	Scientific Name
ALF	1	Alfonsinos	Beryx spp.
APQ	1	Iceland catshark	Apristurus laurussonii
ARU	1	Greater silver smelt	Argentina silus
BLI	1	Blue ling	Molva dypterigia
BSF	1	Black scabbardfish	Aphanopus carbo
CFB	1	Black dogfish	Centroscyllium fabricii
CYO	1	Portuguese dogfish	Centroscymnus coelolepis
CYP	1	Longnose velvet dogfish	Centroscymnus crepidater
DCA	1	Birdbeak dogfish	Deania calcea
ETR	1	Greater lanternshark	Etmopterus princeps
ETX	1	Velvet belly	Etmopterus spinax
FOX	1	Forkbeards	Phycis blennoides
GAM	1	Mouse catshark	Galeus murinus
GSK	1	Greenland shark	Somniosus microcephalus
GUP	1	Gulper shark	Centrophorus granulosus
GUQ	1	Leafscale gulper shark	Centrophorus squamosus
HXC	1	Frilled shark	Chlamydoselachus anguineus
ORY	1	Orange roughy	Hoplostethus atlanticus
OXN	1	Sailfin roughshark (Sharpback shark)	Oxynotus paradoxus
RNG	1	Roundnose grenadier	Coryphaenoides rupestris
SBL	1	Six-gilled shark	Hexanchus griseus
SCK	1	Kitefin shark	Dalatias licha
SHO	1	Blackmouth dogfish	Galeus melastomus
SYR	1	Knifetooth dogfish	Scymnodon ringens
ALC	2	Baird's smoothhead	Alepocephalus bairdii
ANT	2	Blue antimora (Blue hake)	Antimora rostrata
BRF	2	Bluemouth (Blue mouth redfish)	Helicolenus dactylopterus
CMIO	2	Rabbit fish (rattail)	Chimaera monstrosa
COE	2	Conger eel	Conger conger
CYH	2	Large-eyed rabbitfish (ratfish)	Hydrolagus mirabilis
ELZ	2	Eelpout	Lycodes esmarkii
EPI	2	Black (Deep-water) cardinal fish	Epigonus telescopus
HPR	2	Silver roughy (Pink)	Hoplostethus mediterraneus
JAD	2	Norwegian skate	Raja nidarosiensis
KEF	2	Deep-water red crab	Chaecon (Geryon) affinis
PHO	2	Risso's smoothhead	Alepocephalus rostratus
RCT	2	Straightnose rabbitfish	Rhinochimaera atlantica
RHG	2	Roughhead grenadier (Rough rattail)	Marcrourus berglax
RIB	2	Common mora	Mora moro
RJG	2	Arctic skate	Raja hyperborea
RJY	2	Round skate	Raja fyllae
SBR	2	Red (blackspot) seabream	Pagellus bogaraveo
SFS	2	Silver scabbard fish (Cutlass fish)	Lepidopus caudatus
SFV	2	Small redfish (Norway haddock)	Sebastes viviparus
TJX	2	Spiny (Deep-sea) scorpionfish	Trachyscorpia cristulata
WRF	2	Wreckfish	Polyprion americanus

3.2. Member State data submitted to Commission

SGMOS were asked to examine and make use of Member State data provided earlier to the Commission as part of the Deep Sea regulation. These data were in fact rather limited and contained numerous errors which made them unreliable. SGMOS agreed that a presentation of the most informative part of these data was useful but that most of it would be misleading if included. Figures 3.2.1 shows respectively the distribution of effort for three categories of gear- fixed, mobile and lines. Fixed gears show a preponderance of effort to the west of Ireland and southwards to the Iberian coast.

Mobile gears tend to be distributed more to the north of the region and lines are distributed most widely off the Iberian coast in nearshore and offshore waters.

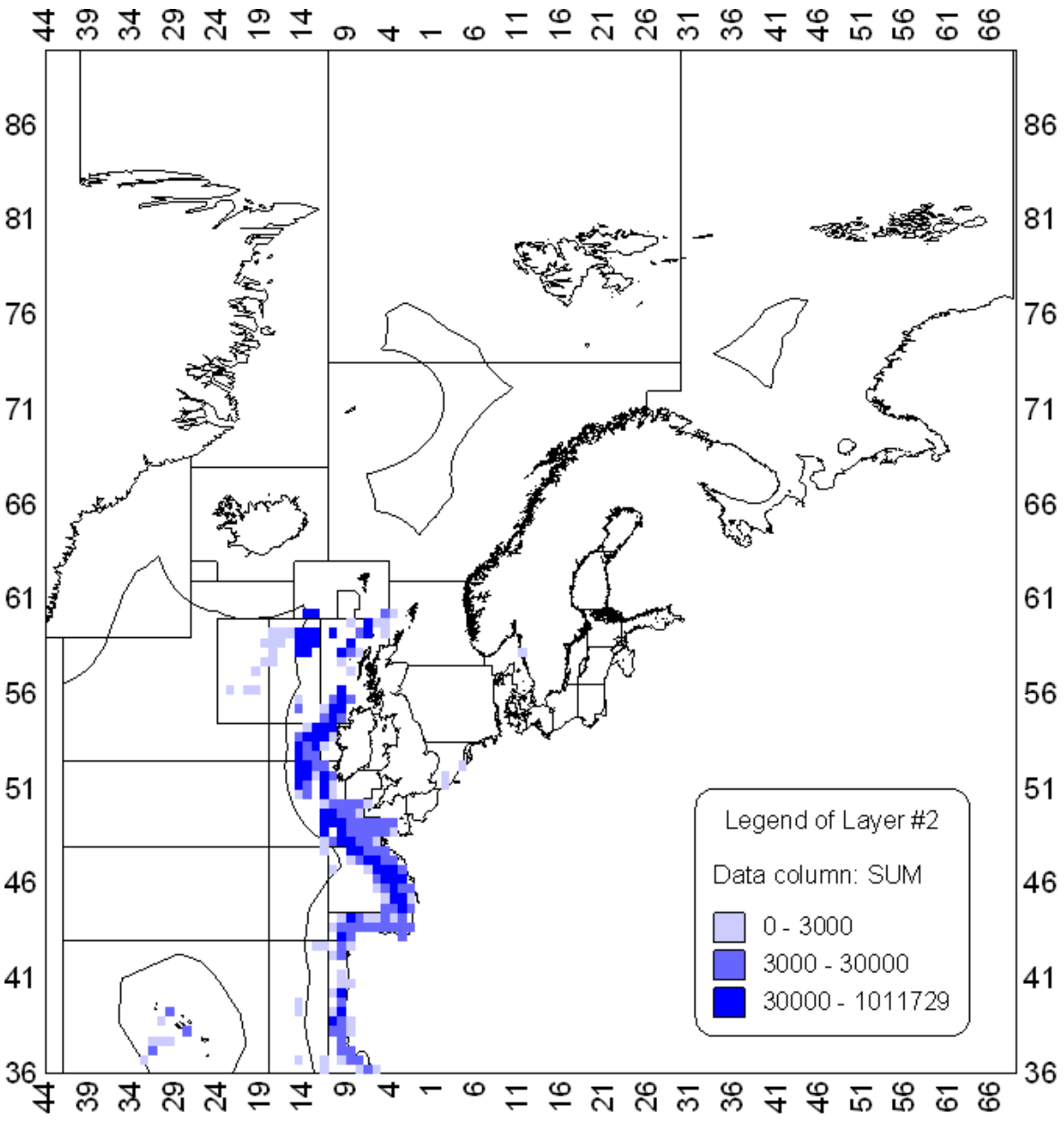

Fig. 3.2.1 Distribution of fixed gear effort from member state data submitted to EU Commission, 2006-2008.

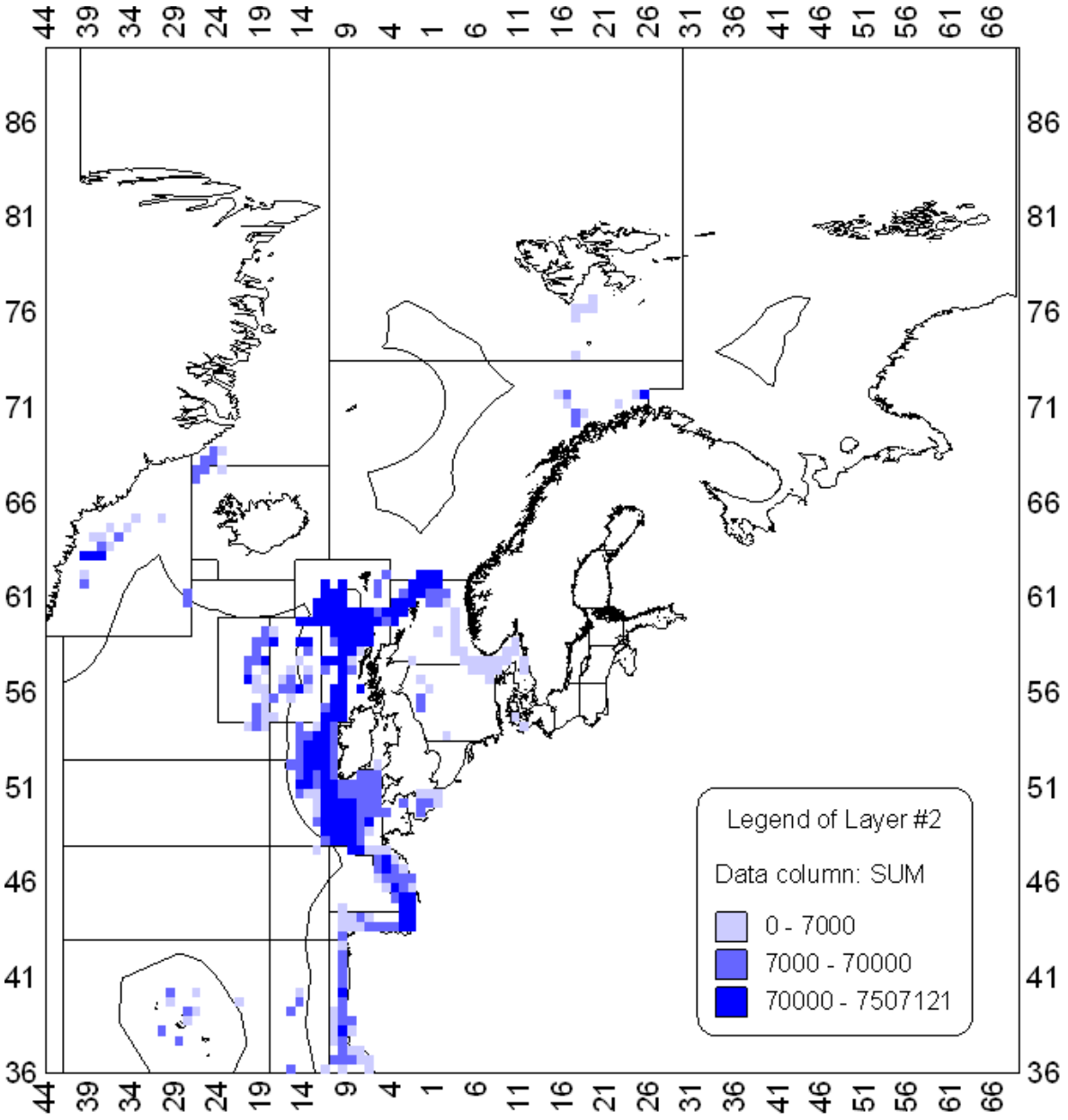

Fig. 3.2.2 Distribution of mobile gears effort from member state data submitted to EU Commission, 2006-2008.

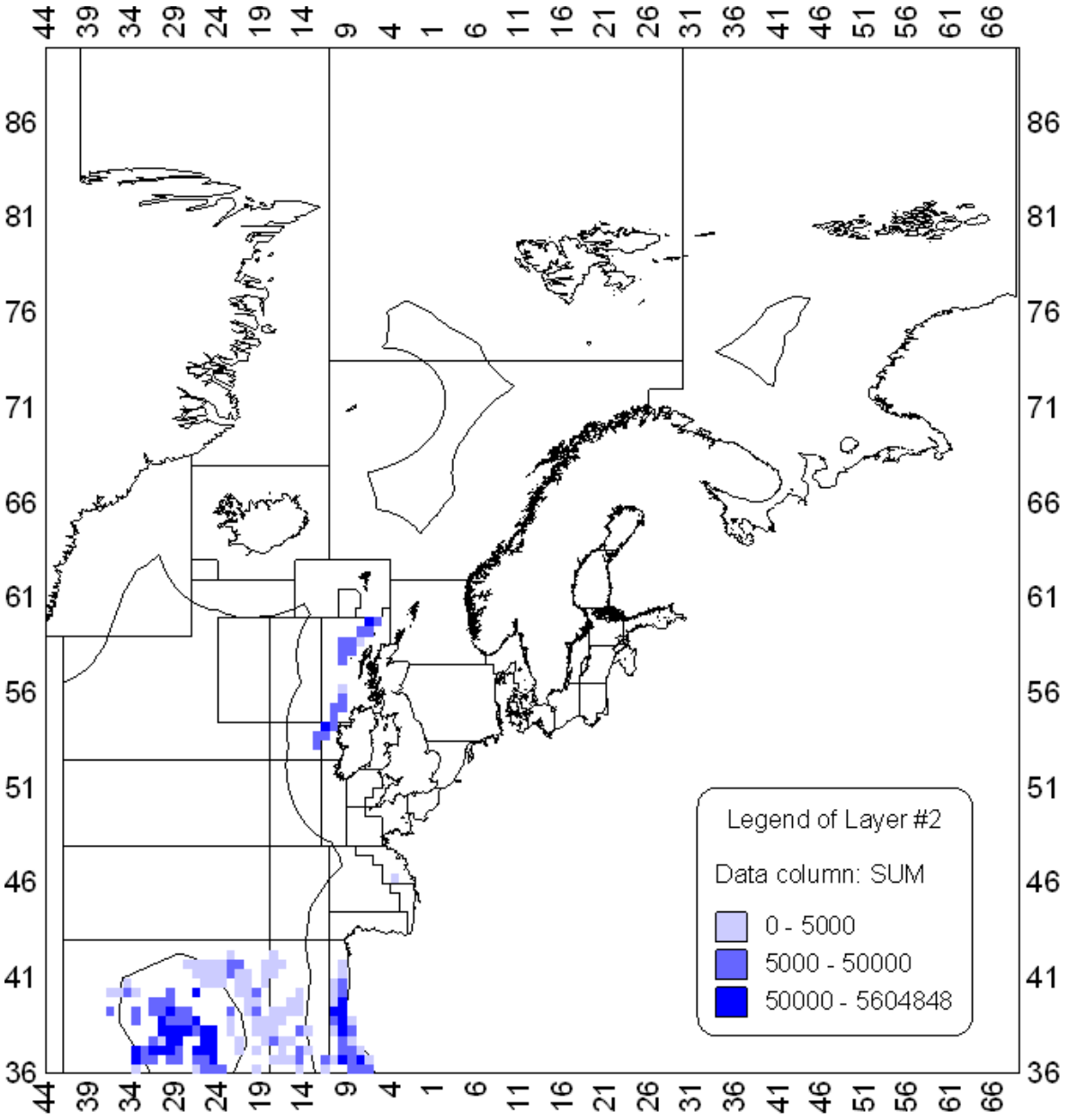

Fig. 6.2.3 Distribution of line fishing effort from member state data submitted to EU Commission, 2006-2008.

3.3. Deep Sea effort, catch composition and catch by gear including discussion of trends

3.3.1. Information presented in report

For each ICES area, tables are included which show effort by country (and an overall effort for the area) and effort by gear. In addition, trends are shown for the most important gears. Catch and catch by gear are shown for each country in bubble plots. For each gear, catch composition is illustrated by the relative sizes of bubble associated with each of the species in the Annex I list, with shading used to give an indication of the absolute amount caught (white = smallest amounts, black = largest amounts)

Data are presented for Kwdays. Information on GT days is made available on the STECF/SGMOS - 09-05 website:

https://stecf.jrc.ec.europa.eu/meetings/2009?p_p_id=62_INSTANCE_ujGU&p_p_lifecycle=0&p_p_state=maximized&p_p_mode=view&p_p_col_id=column-2&p_p_col_count=1&_62_INSTANCE_ujGU_struts_action=%2Fjournal_articles%2Fview&_62_INSTANCE_ujGU_groupId=1416&_62_INSTANCE_ujGU_articleId=132840&_62_INSTANCE_ujGU_version=1.0

It is important to note that some effort submissions were revised and updated late in the day and were not scrutinised to the same extent as those submitted earlier in the process. In addition, anomalies evident in the data presentations for the Western Waters regime (see Section 7) affecting notably French and Portuguese data suggest some corrections are required before a definitive set is arrived at. **For the present, this implies that some caution is required in interpreting effort trends particularly where these countries appear to contribute significant amounts to the overall figures.**

3.3.2. Deep Sea ICES Area I

Effort

Only sparse effort by Germany is reported is from this area (Table 3.3.2.1). None of this is in EU waters.

Table 3.3.2.1 Deep Sea Effort (kwdays) by country ICES Area I (total)

YEAR	BEL	DEN	GER	SPN	FRA	IRL	NED	POR	UK	TOT
2000	0	0	0	0	0	0	0	0	0	0
2001	0	0	0	0	0	0	0	0	0	0
2002	0	0	0	0	0	0	0	0	0	0
2003	0	0	0	0	0	0	0	0	0	0
2004	0	0	0	0	0	0	0	0	0	0
2005	0	0	0	0	0	0	0	0	0	0
2006	0	0	70,600	0	0	0	0	0	0	70,600
2007	0	0	0	0	0	0	0	0	0	0
2008	0	0	0	0	0	0	0	0	0	0

Note: the entry reported by Germany in 2006 comprised otter trawl effort only

Catch and Catch Composition

No information was provided from this area.

3.3.3. Deep Sea ICES Area II

Effort

Three countries, France, Netherlands and UK contributed most effort in this area with the pattern of each varying through time (Table 3.3.3.1); French effort showed a particularly noticeable drop in the mid 2000s. Germany contributed some effort in the mid 2000s. There is no obvious trend in overall effort and 2008 was just under half the amount in the highest years (2001 and 2006). Table 3.3.3.2 shows the effort expended in the EU part of ICES II, in 2008 this amounted to around 26% of the total in Area II, mostly by France.

The principal gear used in this area (Table 3.3.3.3 and Figure 3.3.3.1) was the otter trawl (by France and UK) with UK gill net fishing becoming more important (albeit at a relatively low level) in recent years. Details on Netherlands gears were not available.

Table 3.3.3.1 Deep Sea Effort (kwdays) 2000-2008 by country ICES Area II (total)

YEAR	BEL	DEN	GER	SPN	FRA	IRL	NED	POR	UK	TOT
2000	0	0	0	0	286,079	0	24,265	0	1,454,010	1,764,354
2001	0	0	0	0	468,631	0	109,437	0	1,235,443	1,813,511
2002	0	0	0	0	105,394	2,940	0	0	759,520	867,854
2003	0	0	128,169	0	38,211	1,350	362,535	0	768,652	1,298,917
2004	0	0	137,284	0	14,229	0	939,228	0	676,011	1,766,752
2005	0	0	43,686	0	76,455	0	196,020	0	829,938	1,146,099
2006	0	0	274,923	0	312,881	0	216,254	0	1,003,079	1,807,137
2007	0	0	0	0	128,045	0	0	0	710,777	838,822
2008	0	0	0	0	137,192	0	0	0	682,899	820,091

Table 3.3.3.2 Deep Sea Effort (kwdays) 2000-2008 by country ICES Area II (EU)

YEAR	BEL	DEN	GER	SPN	FRA	IRL	NED	POR	UK	TOT
2000	0	0		0	286,079	0	24,265	0	165,402	475,746
2001	0	0		0	468,631	0	22,652	0	122,393	613,676
2002	0	0		0	105,394	0		0	114,443	219,837
2003	0	0	33,516	0	38,211	0	13,200	0	66,870	151,797
2004	0	0	87,864	0	14,229	0	158,115	0	26,431	286,639
2005	0	0		0	76,455	0		0	12,017	88,472
2006	0	0	12,000	0	312,881	0		0	200,446	525,327
2007	0	0		0	128,045	0		0	97,363	225,408
2008	0	0		0	137,192	0		0	79,378	216,570

Table 3.3.3.3 Deep Sea Effort (kwdays) 2000-2008 by gear and country ICES Area II (total)

GEAR	YEAR	BEL	DEN	GER	SPN	FRA	IRL	NED	POR	UK	TOT
OTTER	2000	0	0	0	0	286,079	0	0	0	1,434,453	1,720,532
	2001	0	0	0	0	468,631	0	0	0	1,235,443	1,704,074
	2002	0	0	0	0	105,394	0	0	0	758,729	864,123
	2003	0	0	94,653	0	38,211	0	0	0	768,652	901,516
	2004	0	0	4,410	0	14,229	0	0	0	667,335	685,974
	2005	0	0	43,686	0	76,455	0	0	0	822,582	942,723
	2006	0	0	274,923	0	312,881	0	0	0	981,345	1,569,149
	2007	0	0	0	0	128,045	0	0	0	515,799	643,844
	2008	0	0	0	0	137,192	0	0	0	627,692	764,884
LONGLINE	2000	0	0	0	0	0	0	0	0	0	0
	2001	0	0	0	0	0	0	0	0	0	0
	2002	0	0	0	0	0	0	0	0	0	0
	2003	0	0	0	0	0	1,350	0	0	0	1,350
	2004	0	0	0	0	0	0	0	0	0	0
	2005	0	0	0	0	0	0	0	0	0	0
	2006	0	0	0	0	0	0	0	0	0	0
	2007	0	0	0	0	0	0	0	0	0	0
	2008	0	0	0	0	0	0	0	0	0	0
GILL	2000	0	0	0	0	0	0	0	0	19,557	19,557
	2001	0	0	0	0	0	0	0	0	0	0
	2002	0	0	0	0	0	0	0	0	791	791
	2003	0	0	33,516	0	0	0	0	0	0	33,516
	2004	0	0	53,802	0	0	0	0	0	8,676	62,478
	2005	0	0	0	0	0	0	0	0	7,356	7,356
	2006	0	0	0	0	0	0	0	0	21,734	21,734
	2007	0	0	0	0	0	0	0	0	39,241	39,241
	2008	0	0	0	0	0	0	0	0	55,207	55,207

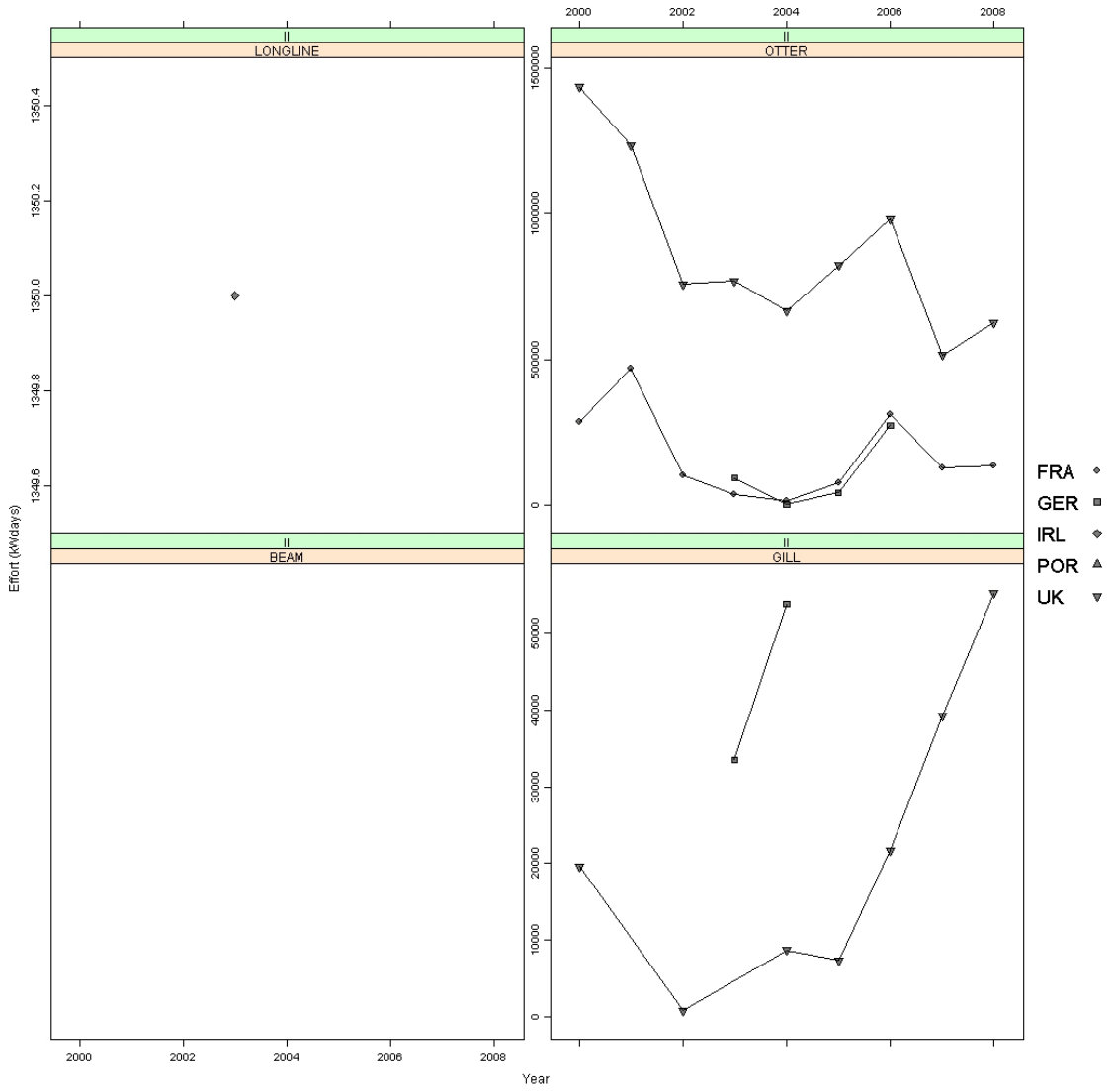

Figure 3.3.3.1 Deep Sea Effort (kwdays) 2000-2008 by gear and country ICES Area II

Catch and catch composition

The largest landings were of greater silver smelt taken by pelagic trawls in a clean fishery operating in EU waters Figures 3.3.3.2 and 3.3.3.4 probably in the region of the Norwegian slope. Otter trawl landings are the next most important and several species are taken in EU waters. There appears to have been an increase in recent years in otter trawl landings of blue ling and it appears to be targeted as catches are quite clean. This is somewhat unexpected from this area because traditionally most blue ling in this area is taken by Norwegian longline. Possibly the increased landings reflects displaced effort from other areas where recently spawning aggregations of this species have been protected. The other possibility is that white ling is being reported as blue ling. Gill nets record catches of forkbeards and Portuguese dogfish. Recorded catches from the coastal states waters are restricted to sporadic blue ling landings (Figures 3.3.3.3 and 3.3.3.5)

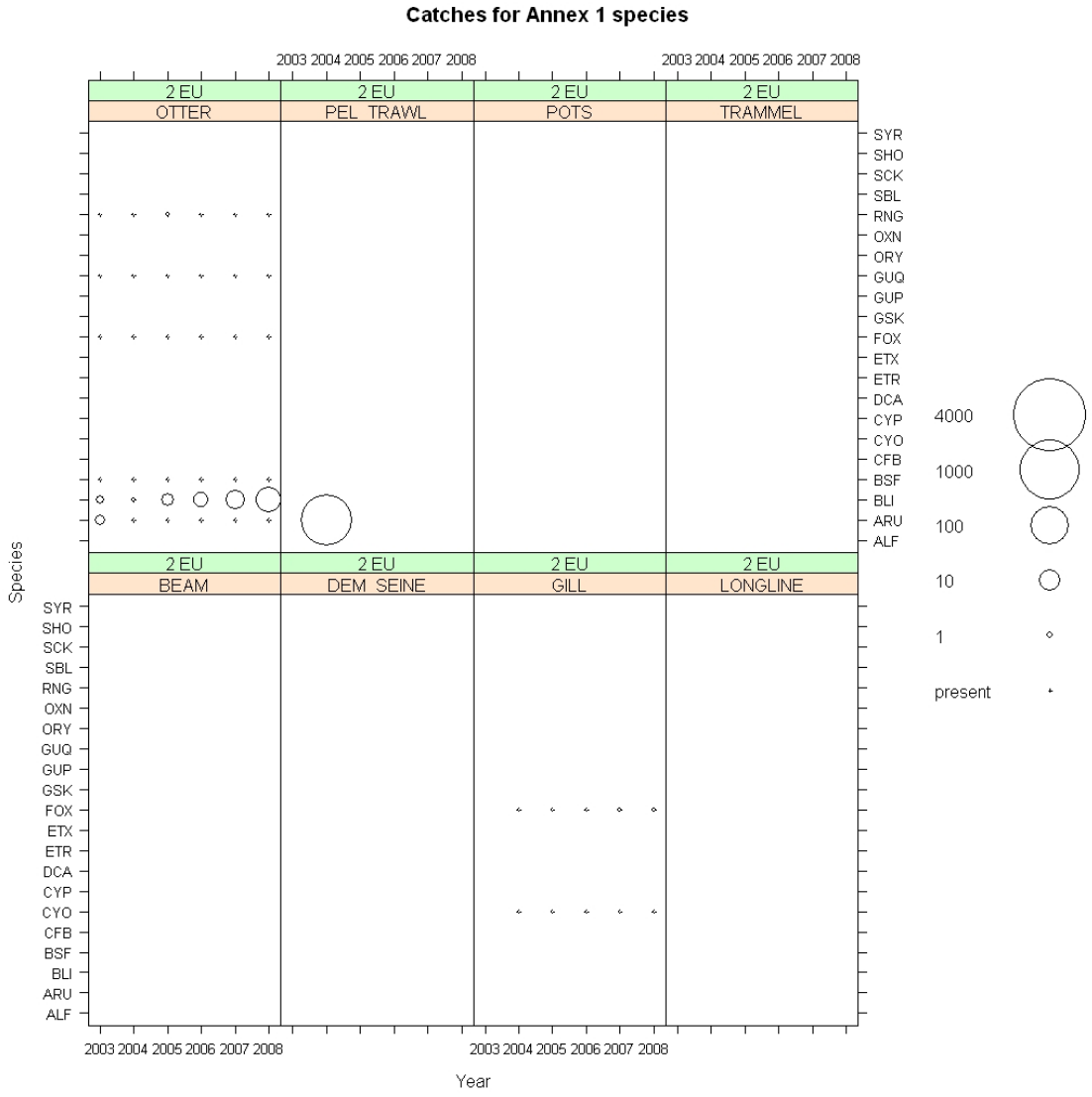

Figure 3.3.3.2 Catches of Annex 1 Deep Sea species (tonnes) 2003-2008 by gear ICES Area II

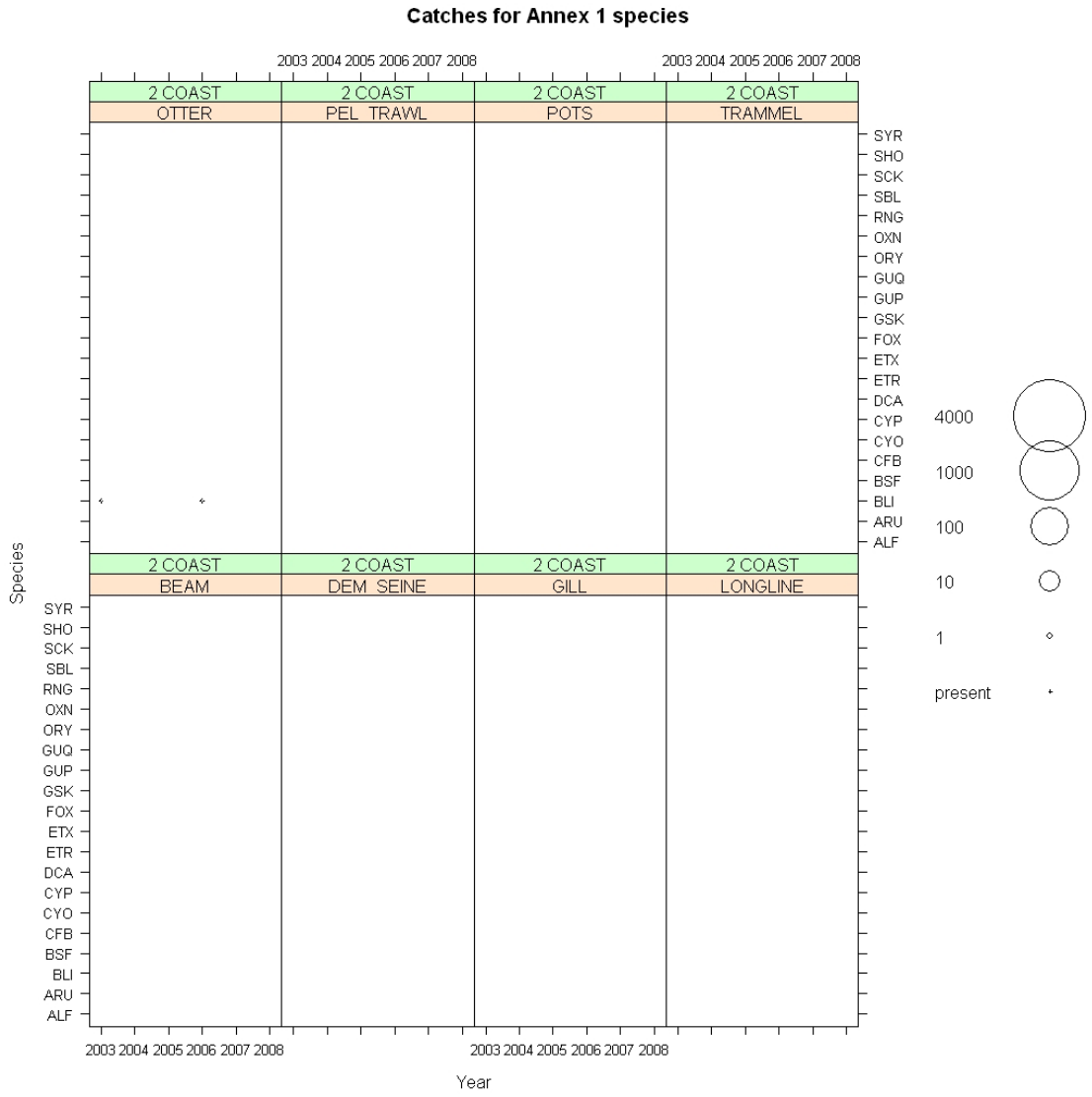

Figure 3.3.3.3 Catches of Annex 1 Deep Sea species (tonnes) 2003-2008 by gear ICES Area II coast

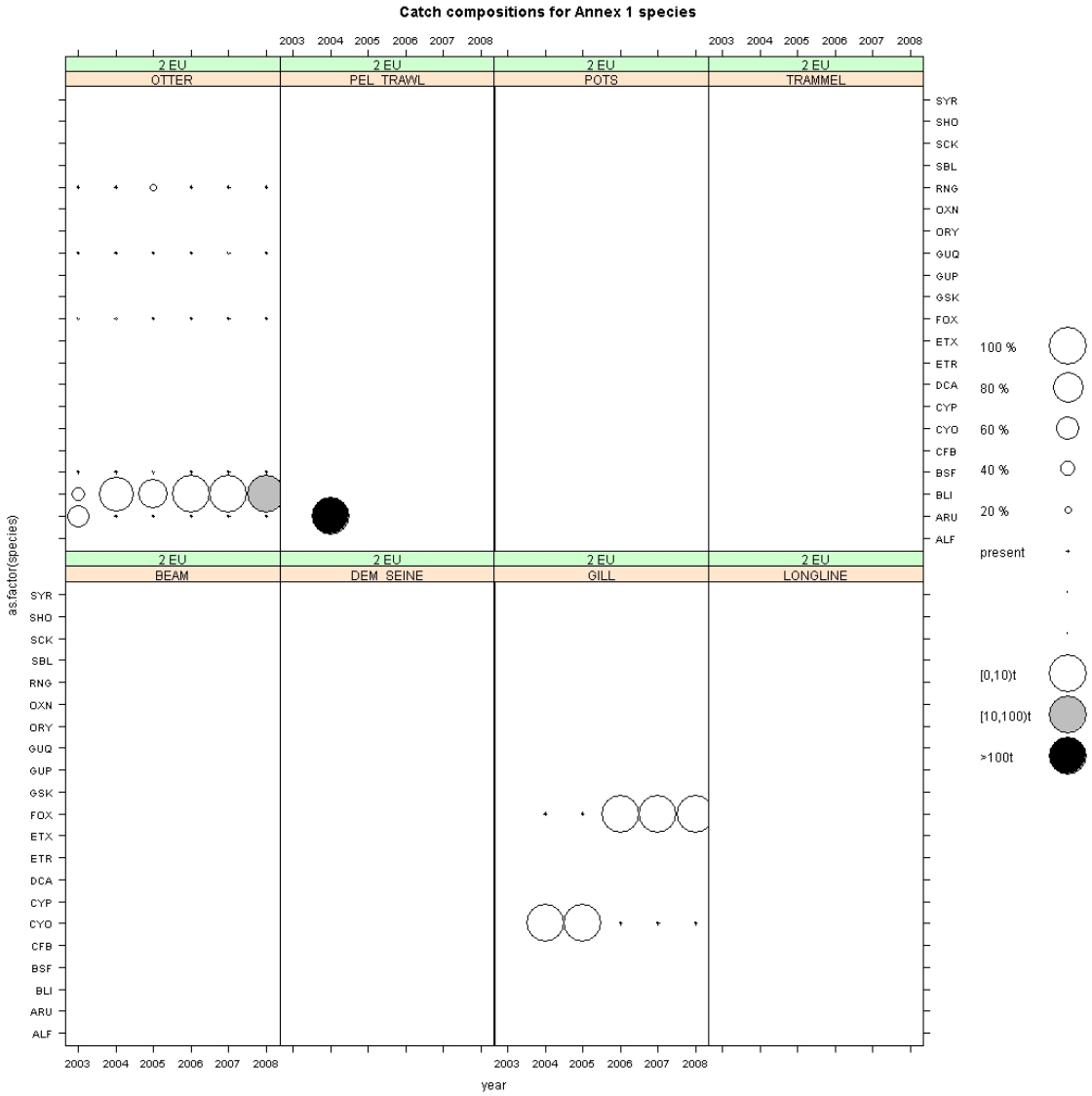

Figure 3.3.3.4 Catch composition of Annex 1 Deep Sea species 2003-2008 by gear ICES Area II EU

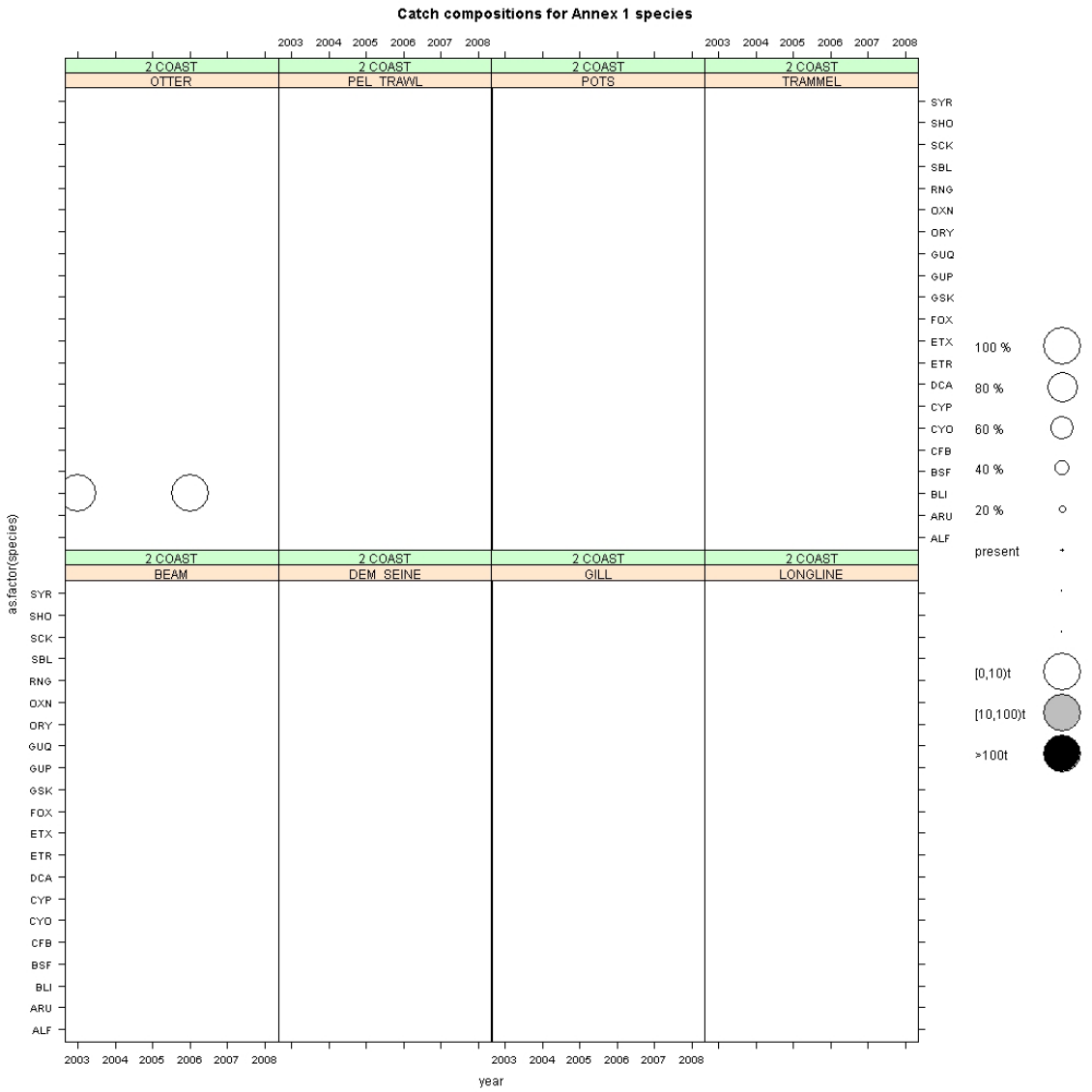

Figure 3.3.3.5 Catch composition of Annex 1 Deep Sea species 2003-2008 by gear ICES Area II Coastal states waters

3.3.4. Deep Sea ICES Area III

Effort

All effort takes place in EU waters but is very limited and the only records are for German vessels.

Table 3.3.4.1 Deep Sea Effort (kwdays) 2000-2008 by country ICES Area III (total)

YEAR	BEL	DEN	GER	SPN	FRA	IRL	NED	POR	UK	TOT
2000	0	0	0	0	0	0	0	0	0	0
2001	0	0	0	0	0	0	0	0	0	0
2002	0	0	0	0	0	0	0	0	0	0
2003	0	0	0	0	0	0	0	0	0	0
2004	0	0	1,470	0	0	0	0	0	0	1,470
2005	0	0	0	0	0	0	0	0	0	0
2006	0	0	0	0	0	0	0	0	0	0
2007	0	0	0	0	0	0	0	0	0	0
2008	0	0	0	0	0	0	0	0	0	0

Note: the entry reported by Germany in 2004 comprised otter trawl effort only

Catch and catch composition

The very limited catch is of blueling in 2004.

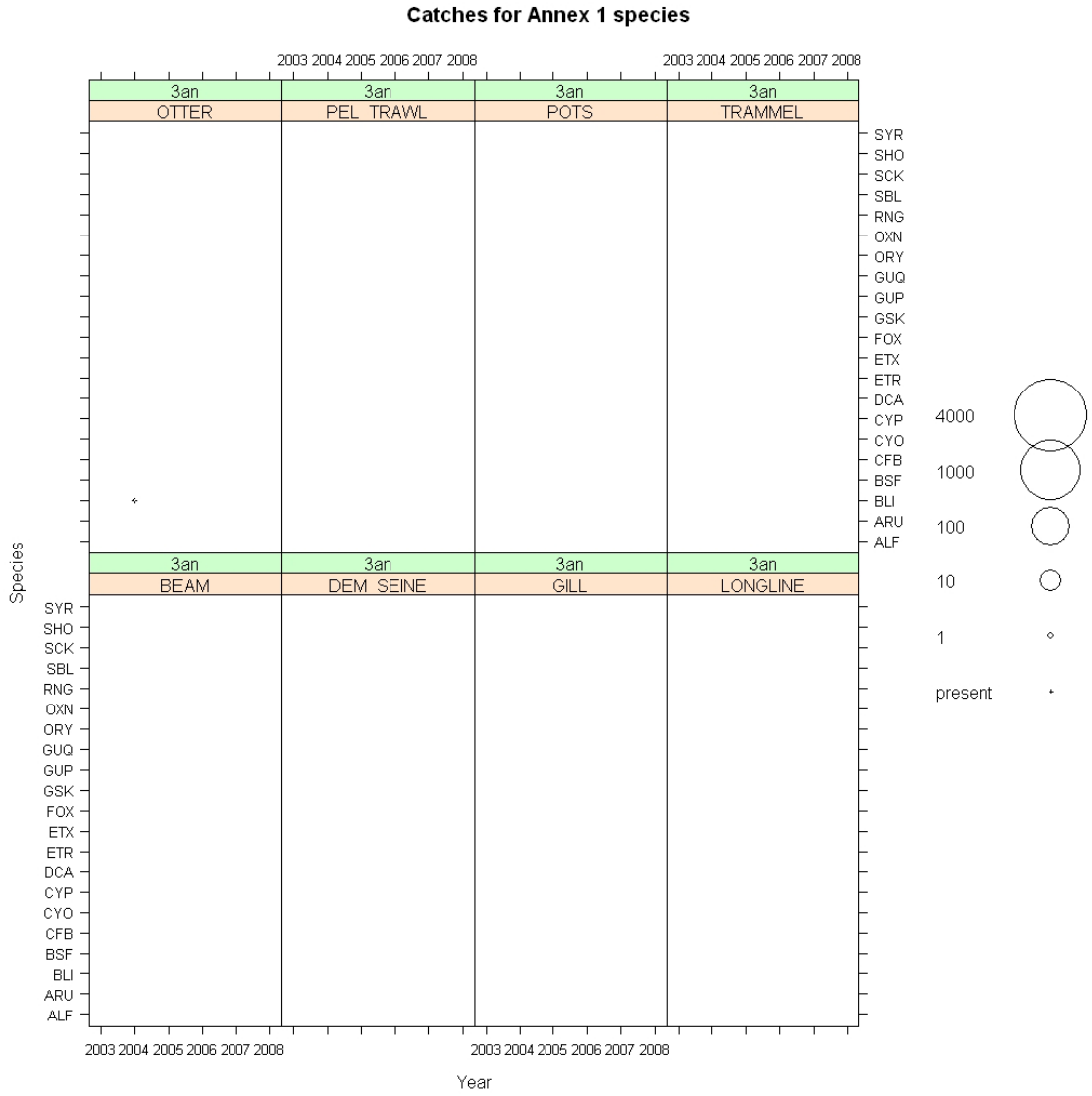

Figure 3.3.4.1 Catches of Annex 1 Deep Sea species (tonnes) 2003-2008 by gear ICES Area III

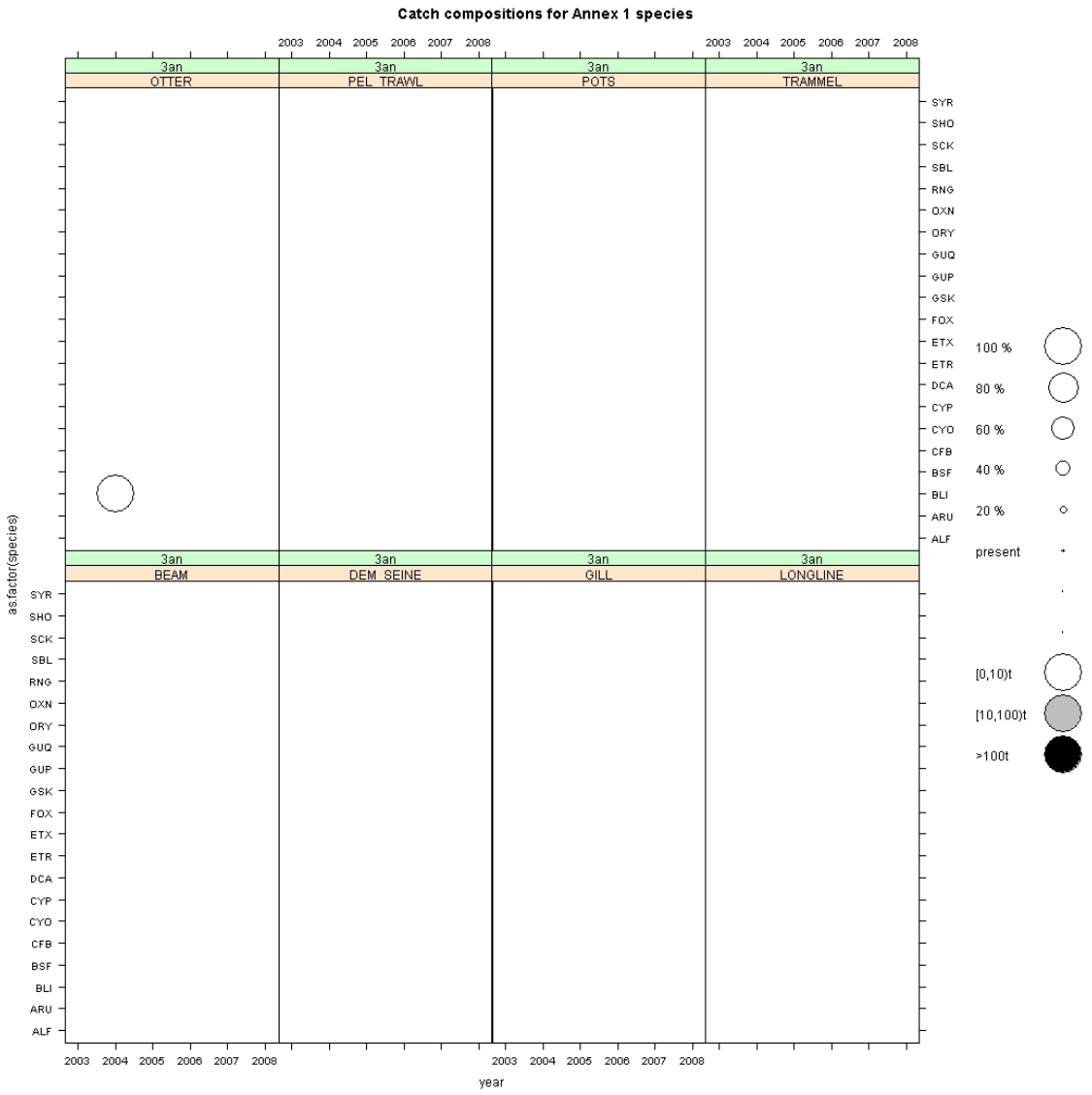

Figure 3.3.4.2 Catch composition of Annex 1 Deep Sea species 2003-2008 by gear ICES Area III EU

3.3.5. Deep Sea ICES Area IV

Effort

All reported effort in this ICES area occurs in EU waters. Three countries, France, Netherlands and UK contributed most effort in this area (Table 3.3.5.1). French and UK effort showed marked declines throughout the time period, while Dutch effort peaked in the mid 2000s. Germany also contributed some effort in the mid 2000s. There is an obvious downward trend in overall effort with the 2008 figure only about 25% of the figure in 2000.

Otter trawl was by far the most important gear used, mainly by France and the UK and the latter also used beam trawl, longline and gill nets in reasonable amounts. Downward trends are evident in all of these (Table 3.3.5.2 and Figure 3.3.3.1). Details on Netherlands gears were not available.

Table 3.3.5.1 Deep Sea Effort (kwdays) 2000-2008 by country ICES Area IV (total)

YEAR	BEL	DEN	GER	SPN	FRA	IRL	NED	POR	UK	TOT
2000	0	0	0	0	2,231,125	25,800	7,260	0	2,987,253	5,251,438
2001	0	0	0	0	861,536	35,145	134,640	0	3,023,864	4,055,185
2002	0	0	0	0	812,772	10,500	128,276	0	3,032,377	3,983,925
2003	0	0	0	0	633,819	0	619,530	0	1,835,877	3,089,226
2004	0	0	206,302	0	226,504	4,701	537,132	0	1,284,533	2,259,172
2005	0	0	134,099	0	477,264	0	500,354	0	1,299,055	2,410,772
2006	0	0	195,941	0	350,801	0	195,760	0	1,399,548	2,142,050
2007	0	0	15,600	0	695,164	0	222,638	0	1,018,323	1,951,725
2008	0	0	0	0	290,110	0	40,084	0	993,200	1,323,394

Table 3.3.5.2 Deep Sea Effort (kwdays) 2000-2008 by gear and country ICES Area IV (total)

GEAR	YEAR	BEL	DEN	GER	SPN	FRA	IRL	NED	POR	UK	TOT
BEAM	2000	0	0	0	0	0	0	0	0	236,790	236,790
	2001	0	0	0	0	0	0	0	0	198,289	198,289
	2002	0	0	0	0	0	0	0	0	264,316	264,316
	2003	0	0	0	0	0	0	0	0	52,274	52,274
	2004	0	0	0	0	0	0	0	0	16,008	16,008
	2005	0	0	0	0	0	0	0	0	14,775	14,775
	2006	0	0	0	0	0	0	0	0	2,045	2,045
	2007	0	0	0	0	0	0	0	0	0	0
	2008	0	0	0	0	0	0	0	0	0	0
OTTER	2000	0	0	0	0	2,231,125	25,800	0	0	2,323,564	4,580,489
	2001	0	0	0	0	861,536	35,145	0	0	2,453,598	3,350,279
	2002	0	0	0	0	812,772	10,500	0	0	2,367,870	3,191,142
	2003	0	0	0	0	633,819	0	0	0	1,437,532	2,071,351
	2004	0	0	39,270	0	226,504	0	0	0	905,088	1,170,862
	2005	0	0	61,113	0	477,264	0	0	0	939,566	1,477,943
	2006	0	0	108,000	0	350,801	0	0	0	952,052	1,410,853
	2007	0	0	0	0	695,164	0	0	0	804,665	1,499,829
	2008	0	0	0	0	290,110	0	0	0	792,682	1,082,792
DEM_SEINE	2000	0	0	0	0	0	0	0	0	0	0
	2001	0	0	0	0	0	0	0	0	3,717	3,717
	2002	0	0	0	0	0	0	0	0	5,806	5,806
	2003	0	0	0	0	0	0	0	0	0	0
	2004	0	0	0	0	0	0	0	0	0	0
	2005	0	0	0	0	0	0	0	0	0	0
	2006	0	0	0	0	0	0	0	0	0	0
	2007	0	0	0	0	0	0	0	0	1,452	1,452
	2008	0	0	0	0	0	0	0	0	4,630	4,630
LONGLINE	2000	0	0	0	0	0	0	0	0	117,747	117,747
	2001	0	0	0	0	0	0	0	0	28,338	28,338
	2002	0	0	0	0	0	0	0	0	36,410	36,410
	2003	0	0	0	0	0	0	0	0	63,020	63,020
	2004	0	0	0	0	0	0	0	0	50,987	50,987
	2005	0	0	0	0	0	0	0	0	85,373	85,373
	2006	0	0	0	0	0	0	0	0	46,397	46,397
	2007	0	0	0	0	0	0	0	0	11,044	11,044
	2008	0	0	0	0	0	0	0	0	8,434	8,434
GILL	2000	0	0	0	0	0	0	0	0	308,720	308,720
	2001	0	0	0	0	0	0	0	0	332,309	332,309
	2002	0	0	0	0	0	0	0	0	330,460	330,460
	2003	0	0	0	0	0	0	0	0	253,584	253,584
	2004	0	0	0	0	0	0	0	0	305,389	305,389
	2005	0	0	3,798	0	0	0	0	0	259,341	263,139
	2006	0	0	0	0	0	0	0	0	399,015	399,015
	2007	0	0	0	0	0	0	0	0	136,272	136,272
	2008	0	0	0	0	0	0	0	0	187,454	187,454

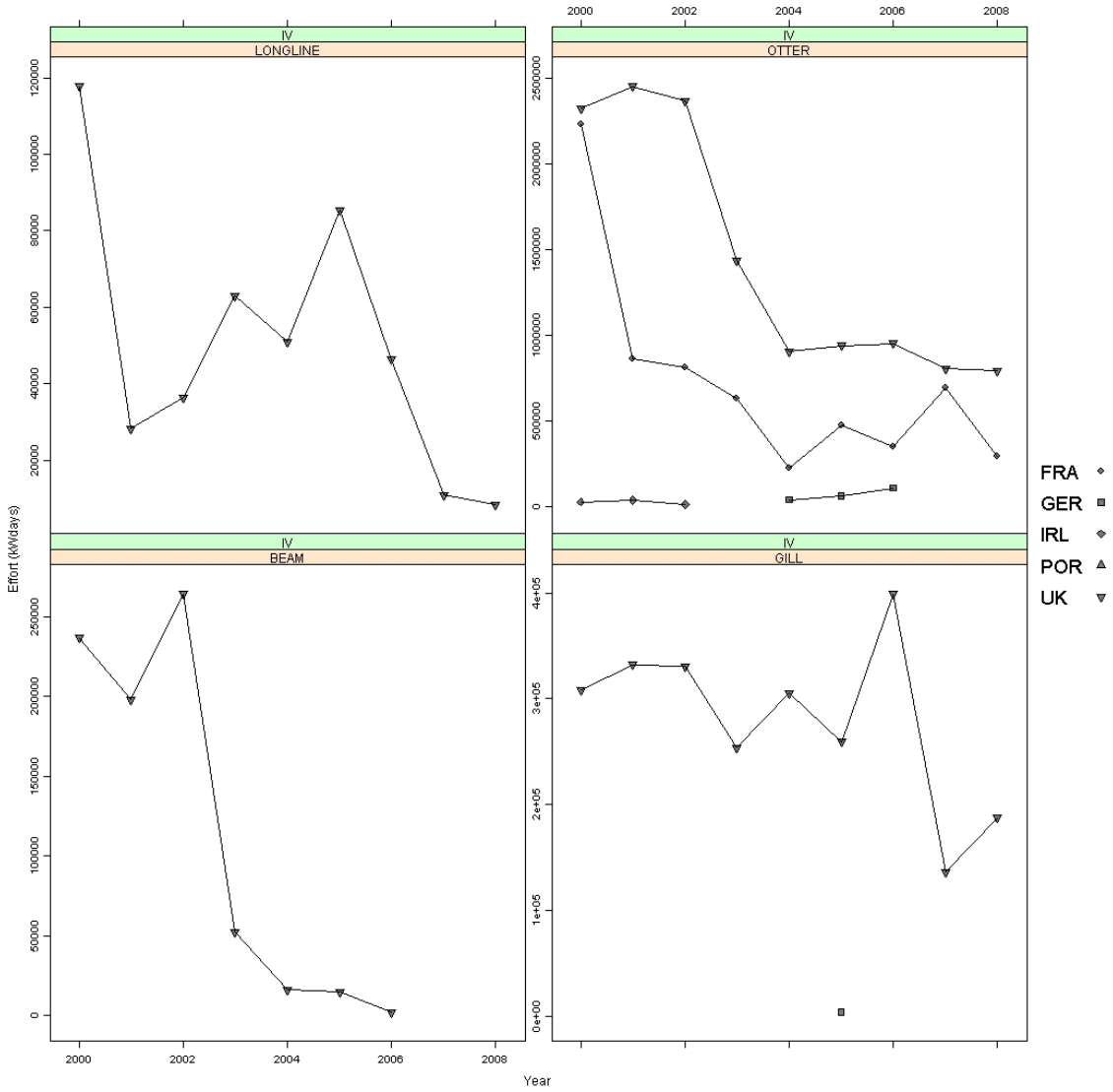

Figure 3.3.5.1 Deep Sea Effort (kwdays) 2000-2008 by gear and country ICES Area IV

Catch and catch composition

The species are typical of the mixed trawl fishery on the slope to the west of Shetland with roundnose grenadier and blue ling dominating. Greenland halibut are probably also important. It's notable that few sharks are landed from the trawl fishery and that landings of sharks from gill nets decreasing, possibly reflecting the ban on Deep Sea gillnets. In terms of catch composition a notable feature is the steadily increasing imppratnce of forkbeards in the gill net fisheries but only associated with low level landings. The moderately large pelagic catches of greater silver smelt in the mod 2000s are to be expected.

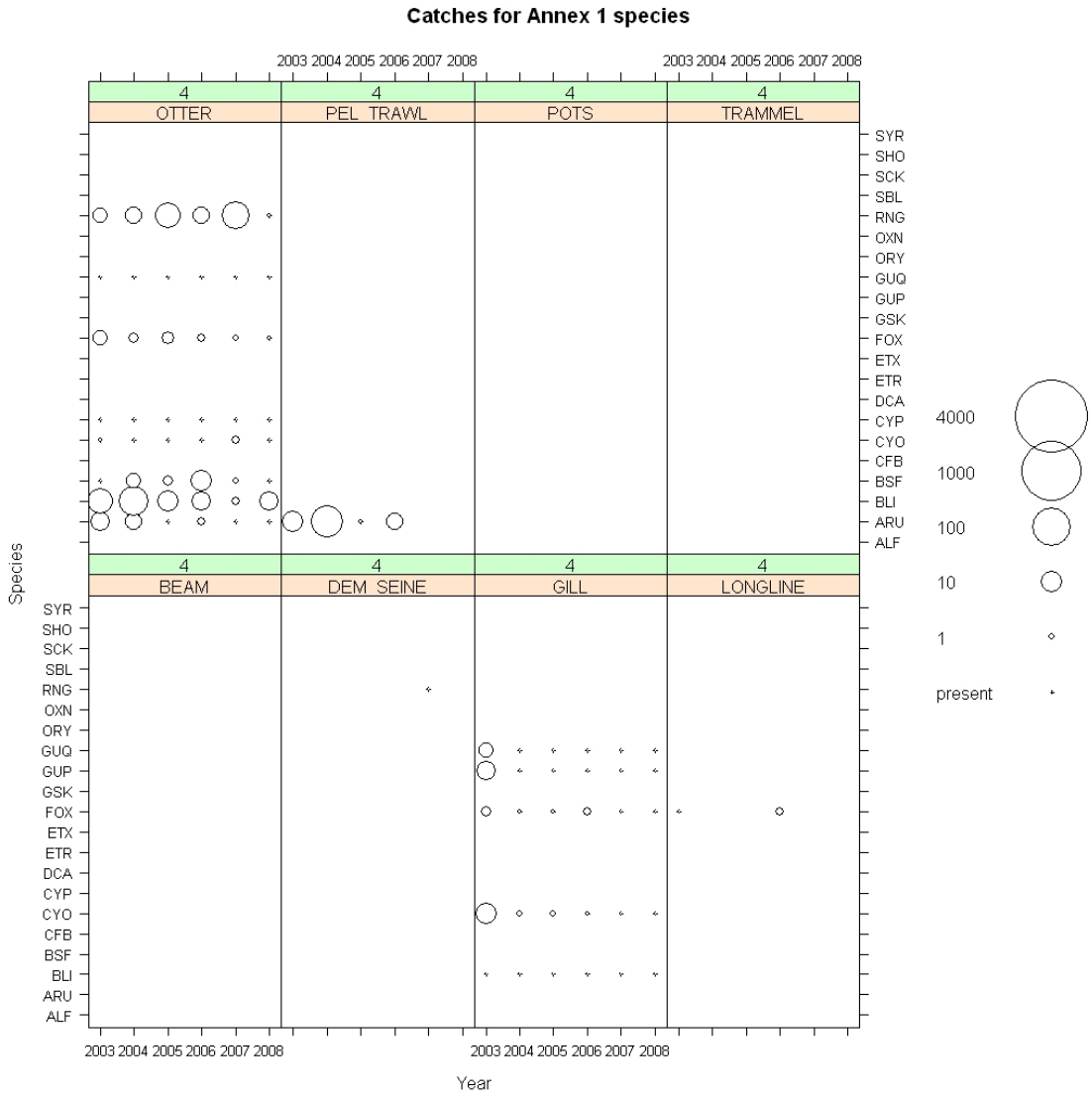

Figure 3.3.5.2 Catches of Annex 1 Deep Sea species (tonnes) 2003-2008 by gear ICES Area IV

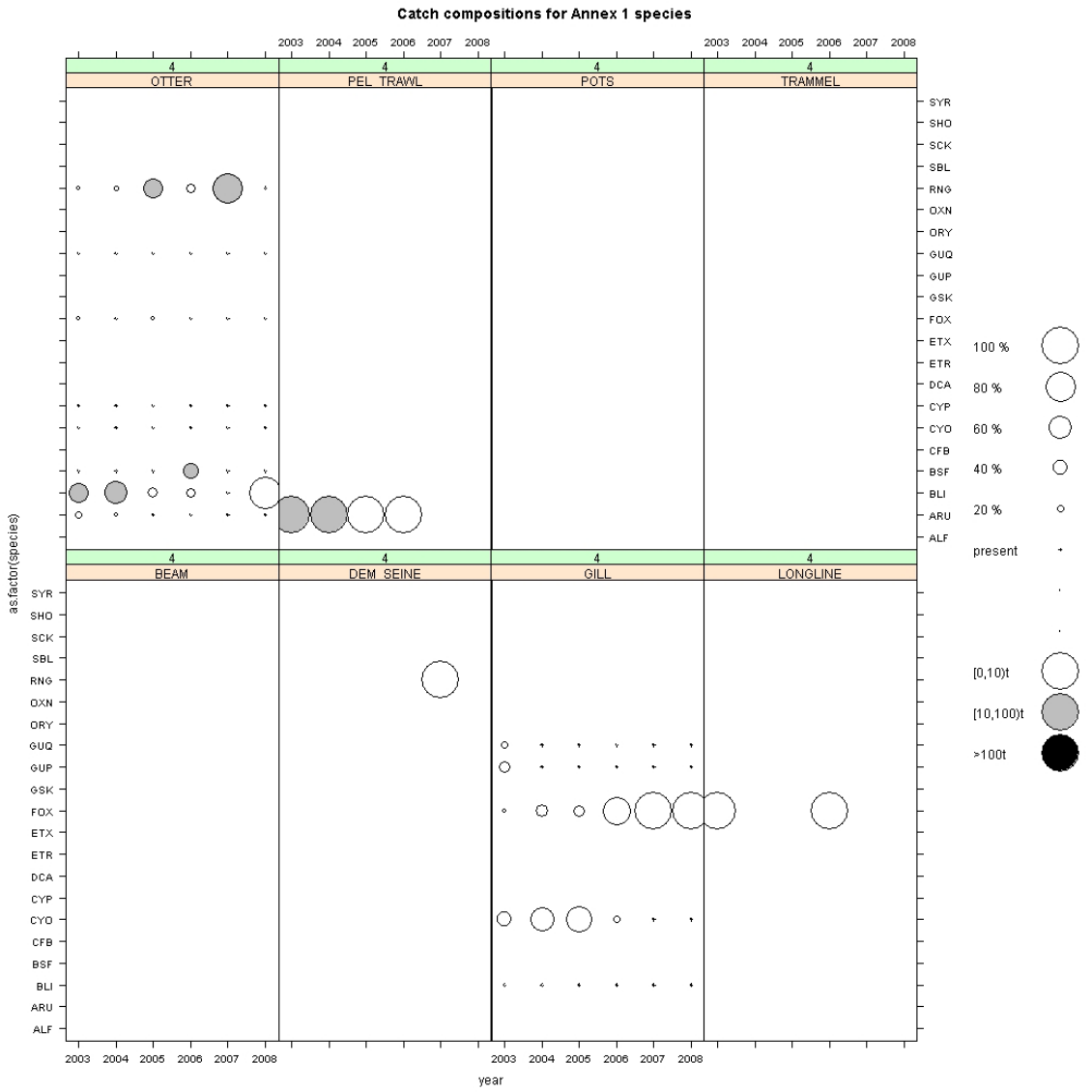

Figure 3.3.5.3 Catch composition of Annex 1 Deep Sea species 2003-2008 by gear ICES Area IV

3.3.6. Deep Sea ICES Area V

Effort

Four countries, France, Netherlands and UK and Germany contributed effort in this area (Tables 3.3.6.1 and 3.3.6.2 and Figure 3.3.6.1). French effort has dominated throughout the series and remains high up to 2008 while UK effort showed marked declines throughout the time period. For both countries, the predominant gear used was otter trawl with some gill net fishing also (Table 3.3.6.3). German effort, mainly by otter trawl was confined to the mid-2000s while Dutch effort generally declined throughout the series – no information was available on the gears used. Most of the effort occurred in the EU waters of this area (ranging from 82% in 2000 to 97% in 2008).

Table 3.3.6.1 Deep Sea Effort (kwdays) 2000-2008 by country ICES Area V (total)

YEAR	BEL	DEN	GER	SPN	FRA	IRL	NED	POR	UK	TOT
2000	0	0	0	0	1,691,407	0	0	0	1,043,854	2,735,261
2001	0	0	0	0	1,936,210	1,800	236,122	0	1,308,553	3,482,685
2002	0	0	0	0	1,731,780	0	14,014	0	1,237,538	2,983,332
2003	0	0	261,411	0	1,881,498	0	389,201	0	1,104,565	3,636,675
2004	0	0	199,700	0	1,891,050	0	191,203	0	1,322,496	3,604,449
2005	0	0	506,515	0	1,739,330	0	234,505	0	945,227	3,425,577
2006	0	0	287,028	0	1,739,533	0	58,383	0	445,998	2,530,942
2007	0	0	26,000	0	1,723,808	0	59,012	0	273,147	2,081,967
2008	0	0	7,281	0	1,520,771	0	33,971	0	126,148	1,688,171

Table 3.3.6.2 Deep Sea Effort (kwdays) 2000-2008 by country ICES Area V (EU)

YEAR	BEL	DEN	GER	SPN	FRA	IRL	NED	POR	UK	TOT
2000	0	0		0	1,691,407	0		0	575,960	2,267,367
2001	0	0		0	1,936,210	1,800	228,862	0	825,283	2,992,155
2002	0	0		0	1,731,780	0	14,014	0	563,698	2,309,492
2003	0	0	260,391	0	1,881,498	0	117,600	0	786,550	3,046,039
2004	0	0	179,932	0	1,891,050	0	175,353	0	830,684	3,077,019
2005	0	0	397,215	0	1,739,330	0	80,010	0	481,358	2,697,913
2006	0	0	254,662	0	1,739,533	0	31,618	0	176,148	2,201,961
2007	0	0	2,600	0	1,723,808	0	11,453	0	184,086	1,921,947
2008	0	0	7,281	0	1,520,771	0	33,971	0	78,486	1,640,509

Table 3.3.6.3 Deep Sea Effort (kwdays) 2000-2008 by gear and country ICES Area V (total)

GEAR	YEAR	BEL	DEN	GER	SPN	FRA	IRL	NED	POR	UK	TOT
BEAM	2000	0	0	0	0	0	0	0	0	0	0
	2001	0	0	0	0	0	0	0	0	0	0
	2002	0	0	0	0	0	0	0	0	0	0
	2003	0	0	0	0	6,077	0	0	0	0	6,077
	2004	0	0	0	0	24,522	0	0	0	0	24,522
	2005	0	0	0	0	0	0	0	0	0	0
	2006	0	0	0	0	0	0	0	0	0	0
	2007	0	0	0	0	0	0	0	0	0	0
	2008	0	0	0	0	0	0	0	0	0	0
OTTER	2000	0	0	0	0	1,502,377	0	0	0	899,251	2,401,628
	2001	0	0	0	0	1,802,135	1,800	0	0	1,074,661	2,878,596
	2002	0	0	0	0	1,463,324	0	0	0	1,143,040	2,606,364
	2003	0	0	256,560	0	1,809,181	0	0	0	974,511	3,040,252
	2004	0	0	174,990	0	1,623,525	0	0	0	1,156,541	2,955,056
	2005	0	0	339,900	0	1,371,821	0	0	0	900,478	2,612,199
	2006	0	0	249,060	0	1,439,245	0	0	0	438,194	2,126,499
	2007	0	0	0	0	1,579,552	0	0	0	273,147	1,852,699
	2008	0	0	7,281	0	1,158,659	0	0	0	126,148	1,292,088
LONGLINE	2000	0	0	0	0	0	0	0	0	778	778
	2001	0	0	0	0	0	0	0	0	788	788
	2002	0	0	0	0	0	0	0	0	0	0
	2003	0	0	0	0	0	0	0	0	0	0
	2004	0	0	0	0	0	0	0	0	0	0
	2005	0	0	0	0	0	0	0	0	3,219	3,219
	2006	0	0	0	0	0	0	0	0	0	0
	2007	0	0	0	0	0	0	0	0	0	0
	2008	0	0	0	0	0	0	0	0	0	0
GILL	2000	0	0	0	0	189,030	0	0	0	140,735	329,765
	2001	0	0	0	0	134,075	0	0	0	233,104	367,179
	2002	0	0	0	0	268,456	0	0	0	86,980	355,436
	2003	0	0	4,851	0	66,240	0	0	0	130,054	201,145
	2004	0	0	0	0	243,003	0	0	0	106,655	349,658
	2005	0	0	0	0	367,509	0	0	0	41,530	409,039
	2006	0	0	0	0	300,288	0	0	0	7,804	308,092
	2007	0	0	0	0	144,256	0	0	0	0	144,256
	2008	0	0	0	0	362,112	0	0	0	0	362,112

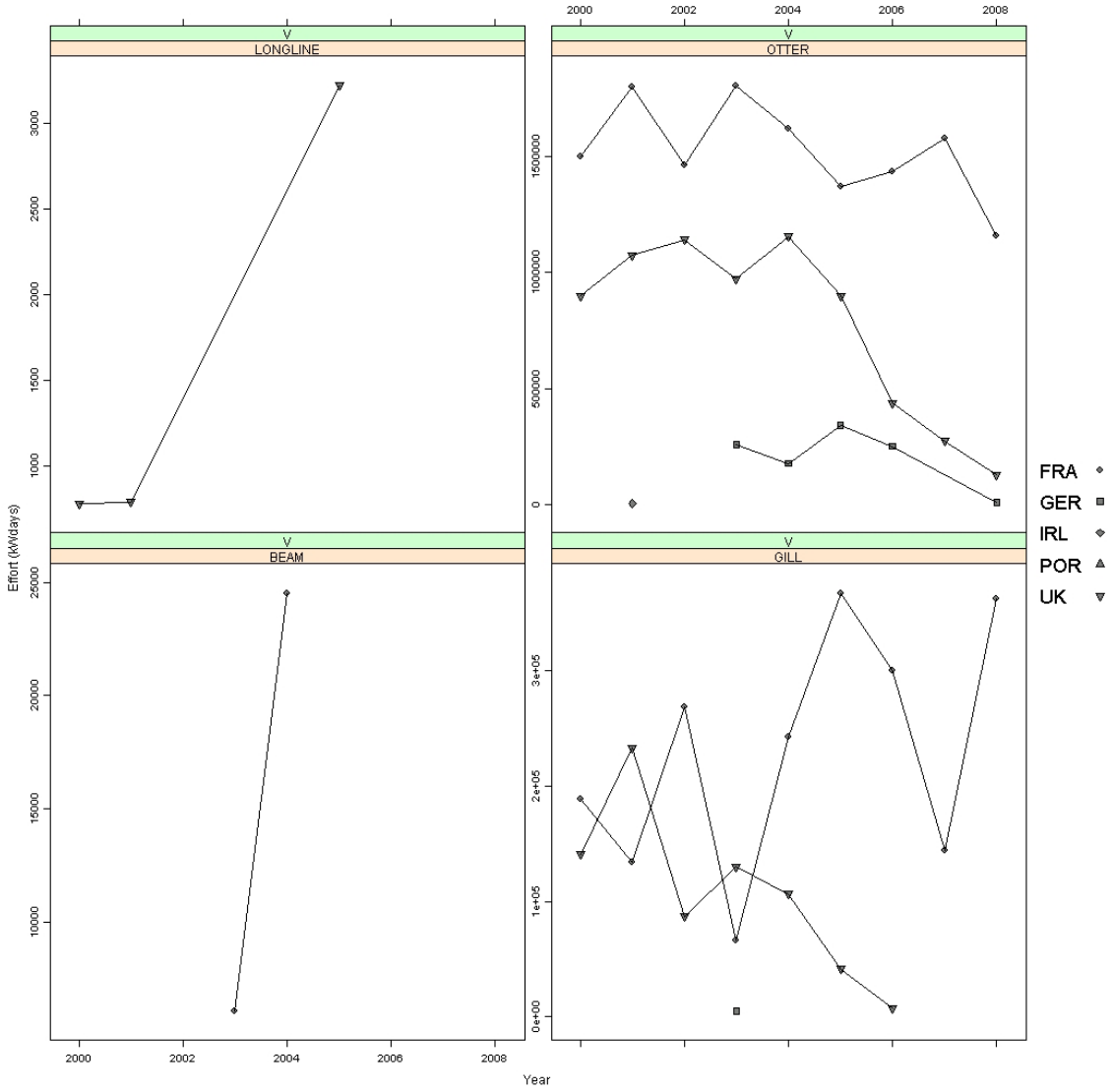

Figure 3.3.6.1 Deep Sea Effort (kwdays) 2000-2008 by gear and country ICES Area V

Catch and catch composition

Va

Relatively high landings of blue ling occur in area Va corresponding to this being a core area for spawning of this species (Figure 3.3.6.2 and 3.3.6.5). The clean nature of this fishery suggests targeting of spawning aggregations. The landings seems to have stopped in the last year (2008) – but it is not obvious why. Other species taken in small quantities are probably taken as bycatch.

Vb

Catches are taken from the EU and coastal states regions of Vb (Figures 3.3.6.3 and Figure 3.3.6.4). Both regions are important for blue ling, black scabbardfish and roundnose grenadier. The catch of sharks has remained high in otter trawls, reflecting the mixed nature of this fishery (Figures 3.3.6.6 and 3.3.6.7). It is interesting to compare this with gill netting where catches of sharks has decreased which

presumably reflects the 2005 banning of the gillnets operated at depths > 600 m by UK 'flagged' vessels. Effort in the French fleet has not reduced presumably because they operate at depths < 600 m. This suggests the banning of Deep Sea gillnets may have been significant for protecting deep sharks (although shark TAC's have also reduced in the same period).

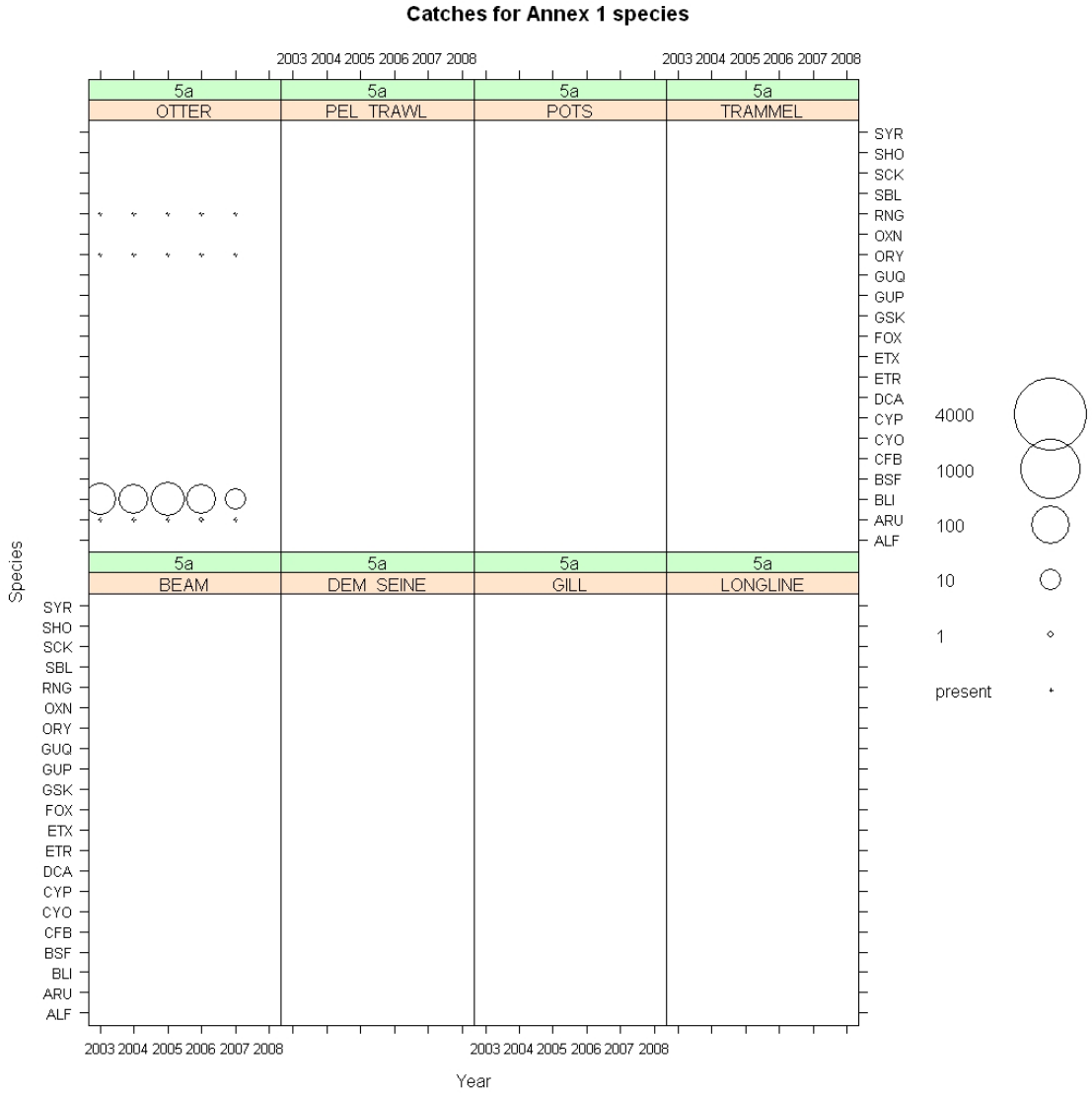

Figure 3.3.6.2 Catches of Annex 1 Deep Sea species (tonnes) 2003-2008 by gear ICES Area Va

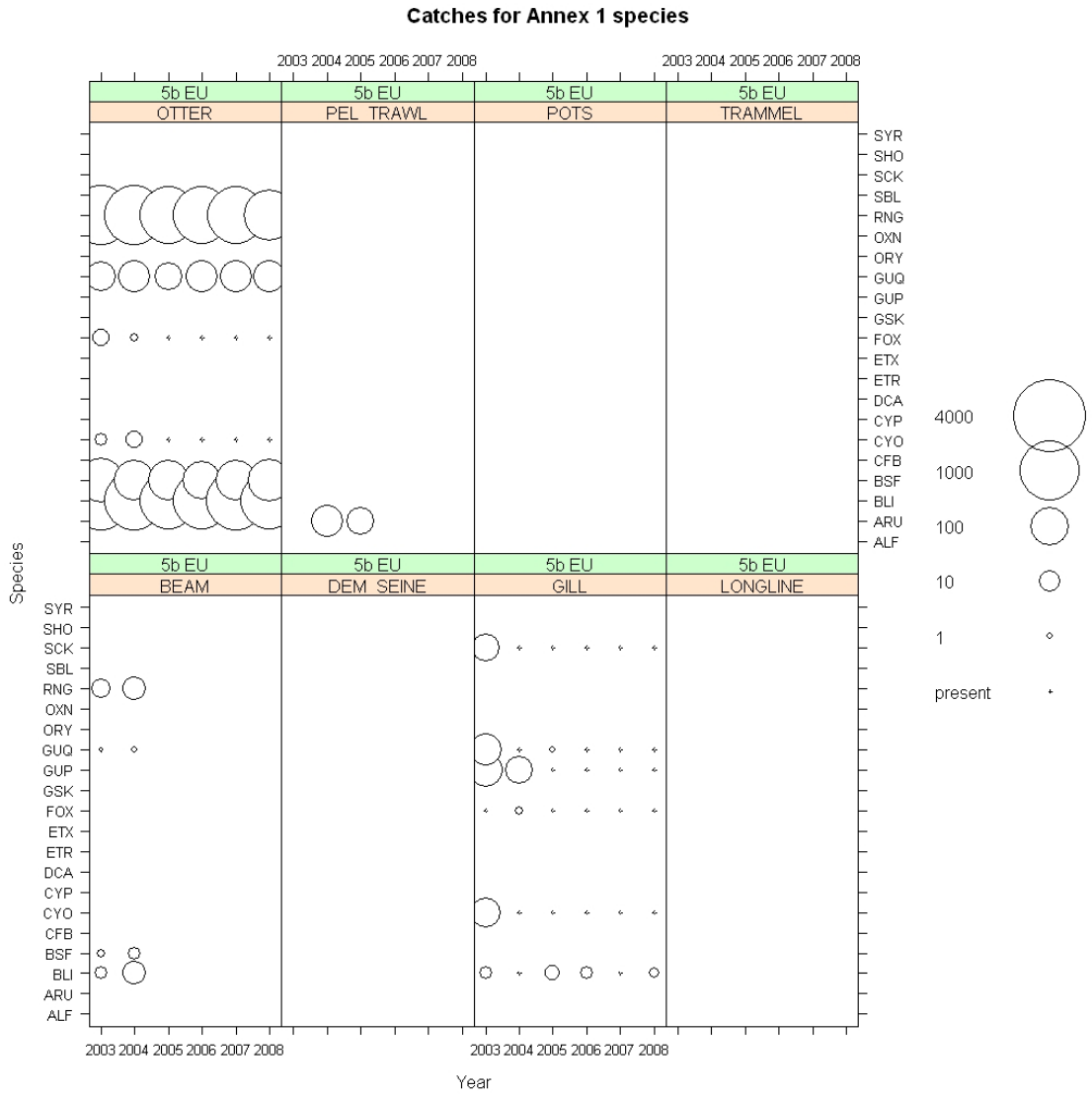

Figure 3.3.6.3 Catches of Annex 1 Deep Sea species (tonnes) 2003-2008 by gear ICES Area 5b EU

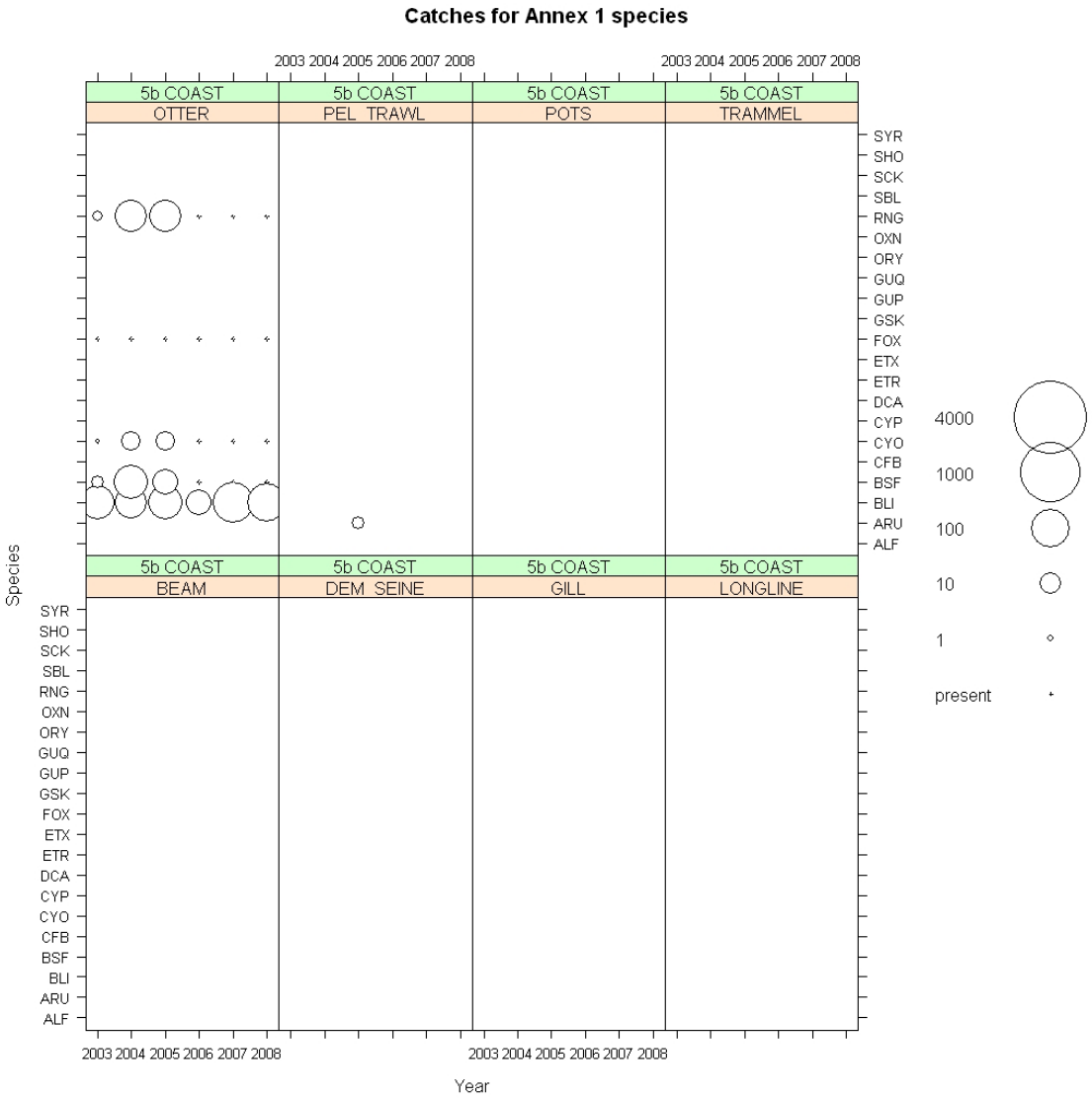

Figure 3.3.6.4 Catches of Annex 1 Deep Sea species (tonnes) 2003-2008 by gear ICES Area 5b Coast

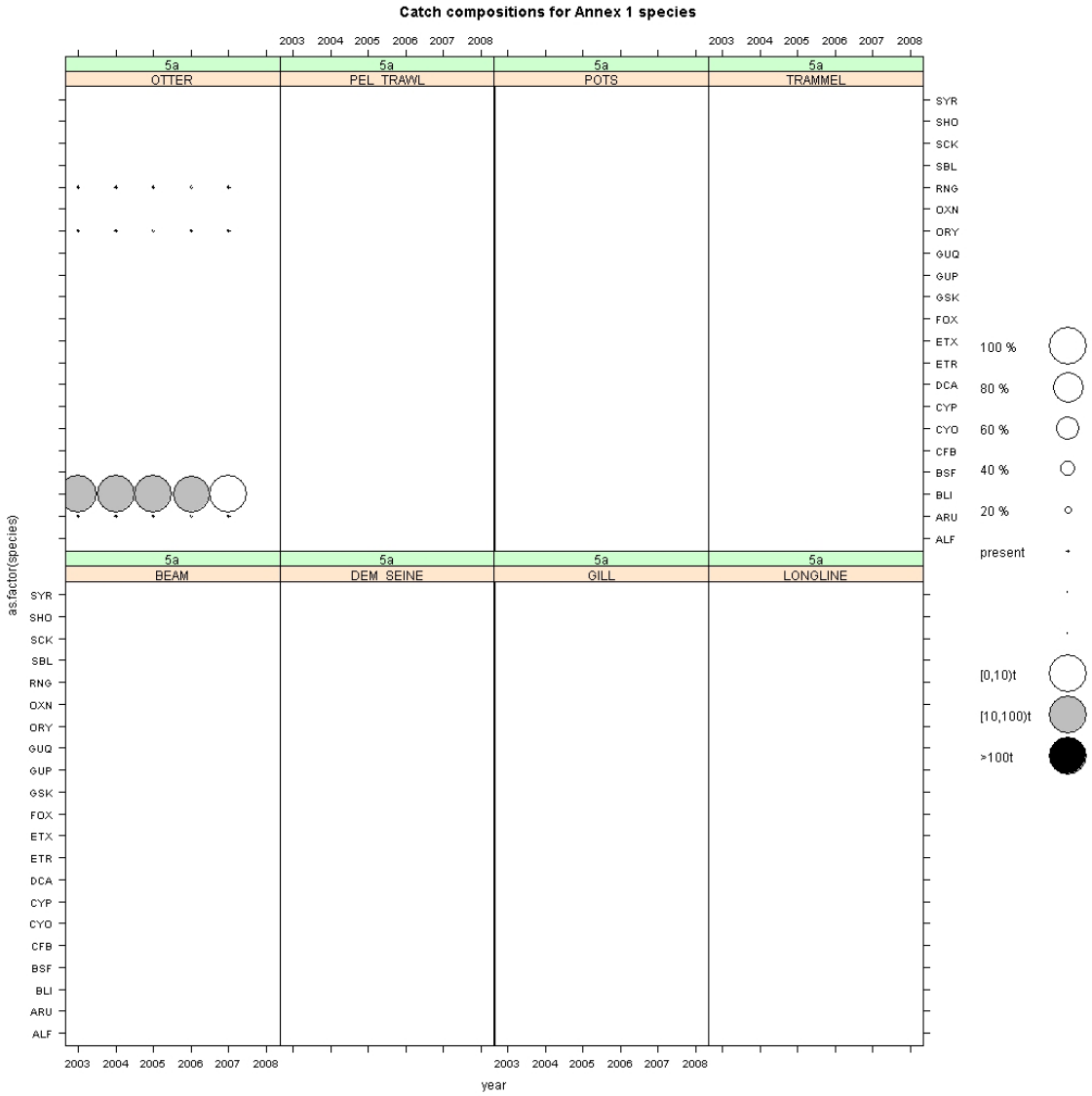

Figure 3.3.6.5 Catch composition of Annex 1 Deep Sea species 2003-2008 by gear ICES Area Va

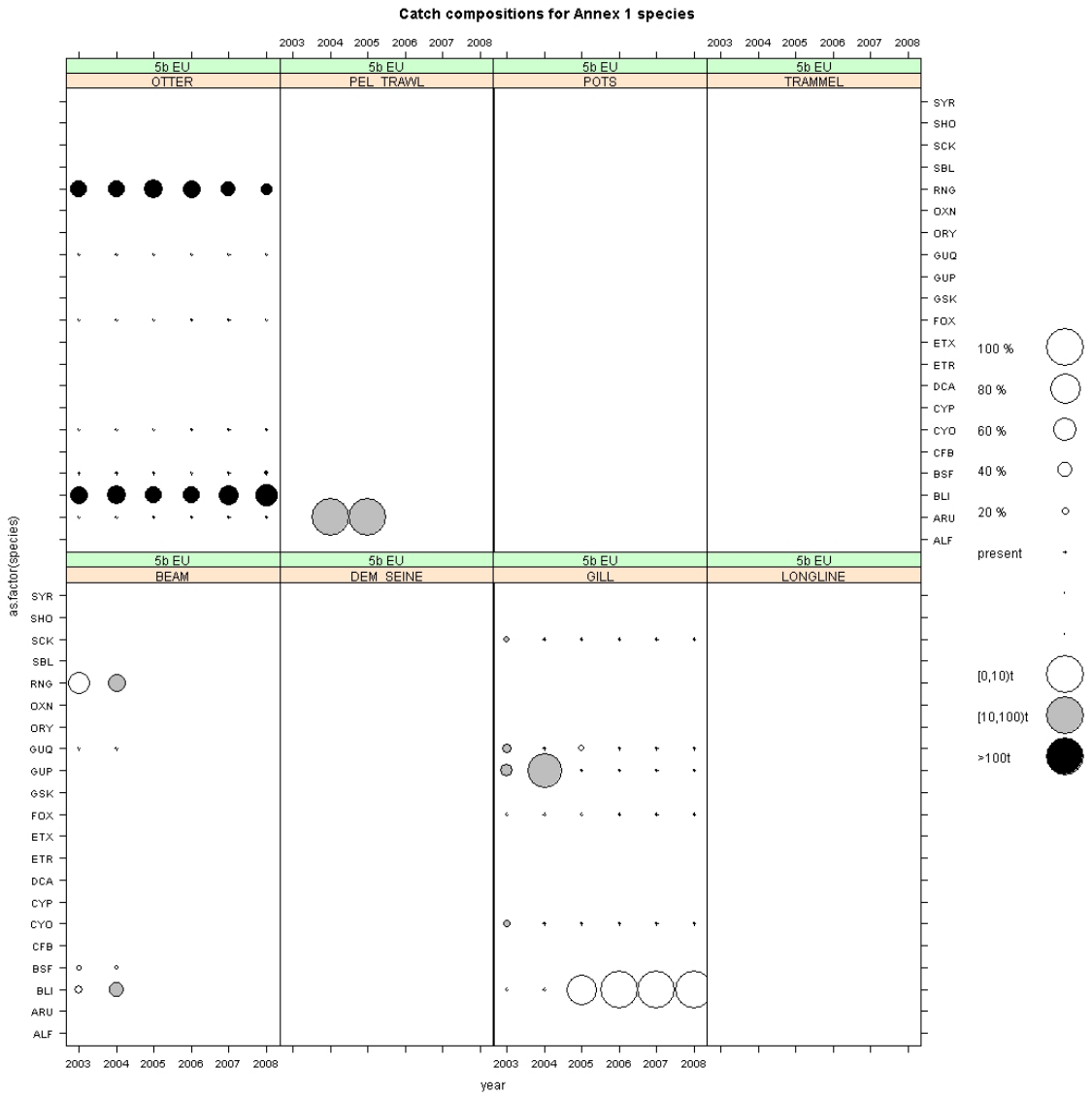

Figure 3.3.6.6 Catch composition of Annex 1 Deep Sea species 2003-2008 by gear ICES Area Vb EU

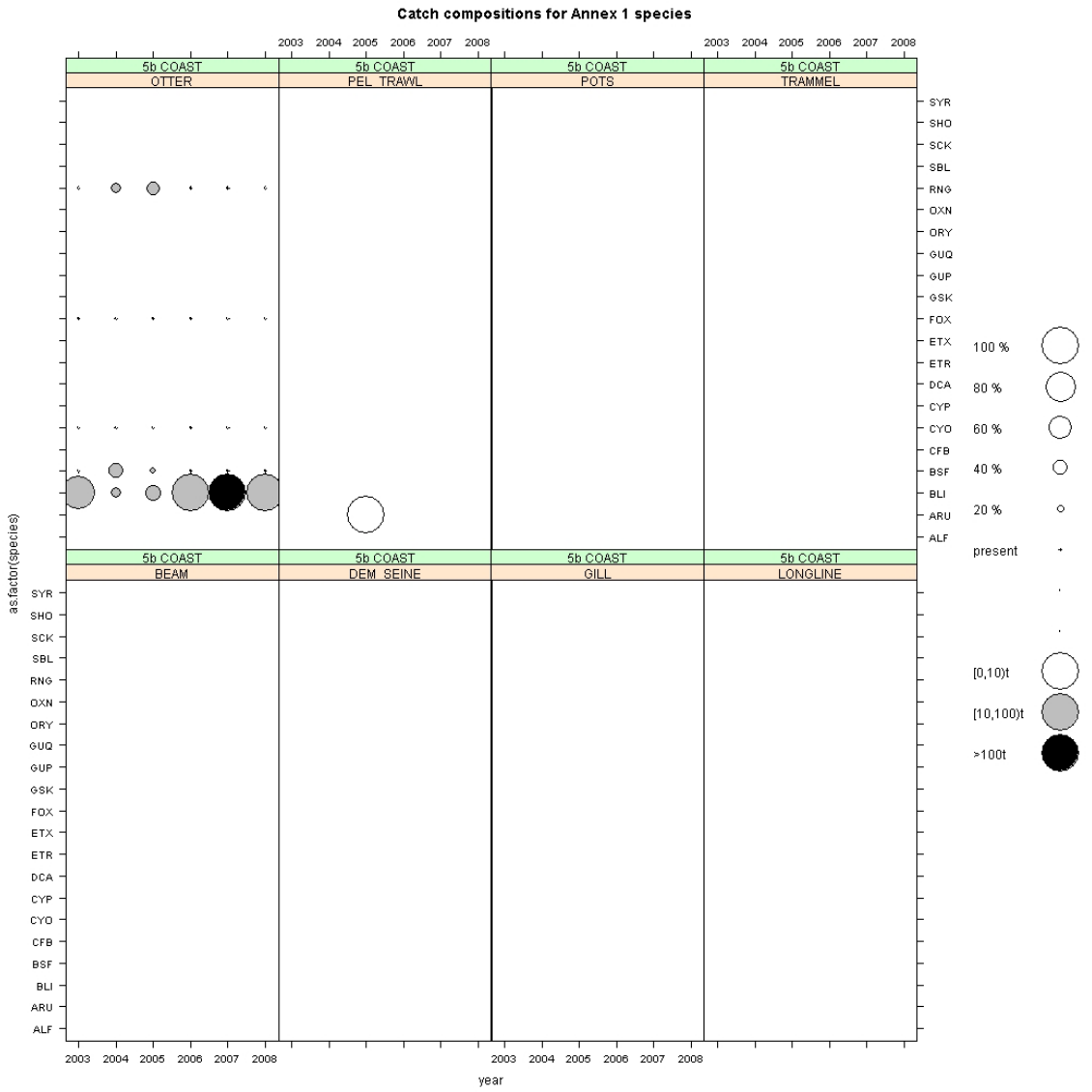

Figure 3.3.6.7 Catch composition of Annex 1 Deep Sea species 2003-2008 by gear ICES Area Vb coast

3.3.7. Deep Sea ICES Area VI

Effort

Several countries, France, Netherlands, Ireland, UK and Germany fished in this area (Tables 3.3.7.1 and Figure 3.3.7.1). French effort dominated throughout the series declining from high values in 2000 and stabilising in the last 3 years at about 40% of earlier values. Otter trawl was the predominant gear in which this pattern was evident (Table 3.3.7.3) while the lower amounts of gill net fishing have fluctuated without obvious trend. Overall UK and Irish effort showed marked declines throughout the time period mainly through reducing otter trawl activity. Irish data suggest that longlines are also used but the reported effort is sporadic. In addition to otter trawl, UK effort comprises all the other gear types shown in Table 3.3.7.3. UK gill net activity has declined while longline is more stable. Dutch effort, again with no information on the gears used) declined by about 35% but has been stable in the last three years. In common with other areas, German effort was confined to the mid-2000s although here the limited detail on gears in use suggests gill nets were the most important type. Throughout the period, most of the effort (97% in 2008) occurred in the EU waters of this area.

Table 3.3.7.1 Deep Sea Effort (kwdays) 2000-2008 by country ICES Area VI (total)

YEAR	BEL	DEN	GER	SPN	FRA	IRL	NED	POR	UK	TOT
2000	0	0	0	0	8,370,983	584,925	1,574,305	0	6,941,644	17,471,857
2001	0	0	0	0	7,485,549	845,204	1,573,595	0	8,024,005	17,928,353
2002	0	0	0	0	7,210,029	554,224	1,380,242	0	7,704,834	16,849,329
2003	0	0	441	0	5,727,722	297,228	608,425	0	6,550,368	13,184,184
2004	0	0	557,611	0	5,291,043	220,854	3,077,707	0	5,976,715	15,123,930
2005	0	0	335,978	0	5,401,865	616,687	1,737,822	0	3,647,751	11,740,103
2006	0	0	356,344	0	3,739,068	63,679	1,054,019	0	2,377,211	7,590,321
2007	0	0	215,066	0	3,824,405	160,602	1,061,055	0	1,941,474	7,202,602
2008	0	0	0	0	3,197,110	128,607	1,013,096	0	1,095,883	5,434,696

Table 3.3.7.2 Deep Sea Effort (kwdays) 2000-2008 by country ICES Area VI (EU)

YEAR	BEL	DEN	GER	SPN	FRA	IRL	NED	POR	UK	TOT
2000	0	0	0	0	8,370,983	584,925	1,574,305	0	6,535,912	17,066,125
2001	0	0	0	0	7,485,549	845,204	1,573,595	0	7,197,253	17,101,601
2002	0	0	0	0	7,210,029	554,224	1,380,242	0	6,871,134	16,015,629
2003	0	0	441	0	5,727,722	297,228	604,027	0	5,328,226	11,957,644
2004	0	0	557,611	0	5,291,043	220,854	2,937,769	0	4,578,573	13,585,850
2005	0	0	335,978	0	5,401,865	616,687	1,737,822	0	2,940,914	11,033,266
2006	0	0	356,344	0	3,739,068	63,679	1,054,019	0	1,847,751	7,060,861
2007	0	0	215,066	0	3,824,405	160,602	1,061,055	0	1,574,183	6,835,311
2008	0	0	0	0	3,197,110	128,607	1,013,096	0	925,283	5,264,096

Table 3.3.7.3 Deep Sea Effort (kwdays) 2000-2008 by gear and country ICES Area VI (total)

GEAR	YEAR	BEL	DEN	GER	SPN	FRA	IRL	NED	POR	UK	TOT
BEAM	2000	0	0	0	0	0	0	0	0	11,278	11,278
	2001	0	0	0	0	0	0	0	0	9,298	9,298
	2002	0	0	0	0	0	0	0	0	4,214	4,214
	2003	0	0	0	0	50,894	0	0	0	19,342	70,236
	2004	0	0	0	0	90,104	0	0	0	50,267	140,371
	2005	0	0	0	0	0	0	0	0	29,475	29,475
	2006	0	0	0	0	0	0	0	0	12,955	12,955
	2007	0	0	0	0	0	0	0	0	0	0
	2008	0	0	0	0	0	0	0	0	0	0
OTTER	2000	0	0	0	0	8,119,657	449,853	0	0	4,580,682	13,150,192
	2001	0	0	0	0	7,080,146	522,150	0	0	5,790,653	13,392,949
	2002	0	0	0	0	6,955,405	216,898	0	0	5,272,320	12,444,623
	2003	0	0	0	0	5,315,681	290,028	0	0	4,658,587	10,264,296
	2004	0	0	12,530	0	5,044,873	192,885	0	0	3,833,681	9,083,969
	2005	0	0	0	0	5,061,761	226,687	0	0	2,342,342	7,630,790
	2006	0	0	0	0	3,527,989	63,679	0	0	1,676,517	5,268,185
	2007	0	0	0	0	3,136,073	148,902	0	0	1,255,003	4,539,978
	2008	0	0	0	0	2,875,826	128,607	0	0	812,879	3,817,312
DEM_SEINE	2000	0	0	0	0	0	0	0	0	951	951
	2001	0	0	0	0	0	0	0	0	0	0
	2002	0	0	0	0	0	0	0	0	2,815	2,815
	2003	0	0	0	0	0	0	0	0	0	0
	2004	0	0	0	0	0	0	0	0	0	0
	2005	0	0	0	0	0	0	0	0	1,567	1,567
	2006	0	0	0	0	0	0	0	0	0	0
	2007	0	0	0	0	0	0	0	0	4,066	4,066
	2008	0	0	0	0	0	0	0	0	3,852	3,852
LONGLINE	2000	0	0	0	0	0	3,693	0	0	644,110	647,803
	2001	0	0	0	0	0	45,222	0	0	629,358	674,580
	2002	0	0	0	0	0	8,100	0	0	514,087	522,187
	2003	0	0	0	0	0	7,200	0	0	447,339	454,539
	2004	0	0	0	0	0	17,000	0	0	561,125	578,125
	2005	0	0	0	0	0	1,200	0	0	387,085	388,285
	2006	0	0	0	0	14,904	0	0	0	462,036	476,940
	2007	0	0	0	0	114,974	11,700	0	0	531,317	657,991
	2008	0	0	0	0	53,370	0	0	0	149,543	202,913
GILL	2000	0	0	0	0	248,086	0	0	0	1,592,248	1,840,334
	2001	0	0	0	0	355,358	8,844	0	0	1,412,665	1,776,867
	2002	0	0	0	0	238,426	0	0	0	1,548,969	1,787,395
	2003	0	0	441	0	358,852	0	0	0	1,355,837	1,715,130
	2004	0	0	66,848	0	108,686	0	0	0	1,215,274	1,390,808
	2005	0	0	29,540	0	308,906	0	0	0	848,914	1,187,360
	2006	0	0	15,192	0	196,175	0	0	0	225,703	437,070
	2007	0	0	0	0	573,358	0	0	0	141,687	715,045
	2008	0	0	0	0	267,914	0	0	0	105,292	373,206

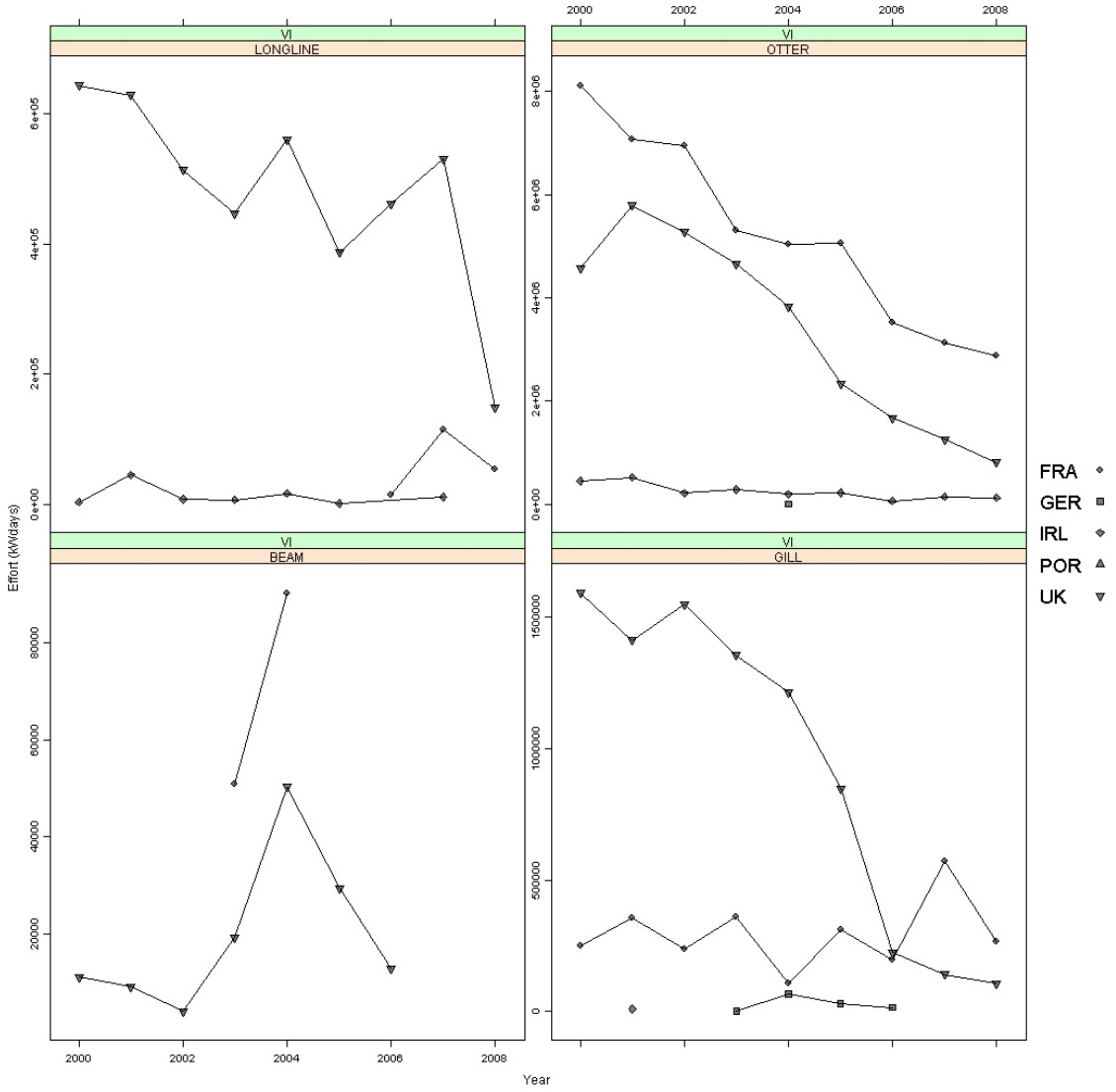

Figure 6.3.7.1 Deep Sea Effort (kwdays) 2000-2008 by gear and country ICES Area VI

Catch and catch composition

VIa

Figure 3.3.7.2 shows aggregate catches in VIa by gear. Results exhibit a more extensive species list than some areas and the species in the mixed trawl fishery are typically expected. Despite the marked reductions in overall effort, landings of some species (roundnose grenadier, scabbardfish and blue ling) have not declined very much and their relative importance has increased a little (Figure 3.3.7.5) compared to forkbeards for example. In the gill net and longline fisheries a range of shark species predominate and landings of these have declined in absolute terms in recent years but still remain important components. The ~ 10 tonnes of CYP sharks landed by pots seems rather improbable, but not impossible

Results in these figures illustrate how unselective the mixed trawl fishery is and (albeit to a lesser extent) less how unselective long-lining is. Only pelagic trawling comes out as a highly targeted fishery (for greater silver smelt).

VIb

The species mix is quite similar to VIa particularly in the EU part of VIb (Figures 3.3.7.3 and 3.3.7.4). The general declines in landings by most gears in the EU area is reflective of declining TACs. The 600 m ban on gill nets appears to have reduced shark landings by this gear type. The magnitude of landings is lower in the RFMO part of VIb and only trawls and gill nets appear to be important. Declines in landings are less pronounced (except in the shark species) and fork beard and blue ling are important here; fork beard landings have increased.

Catch composition patterns are similar to VIa, the most notable feature is the increasing importance of forkbeards.

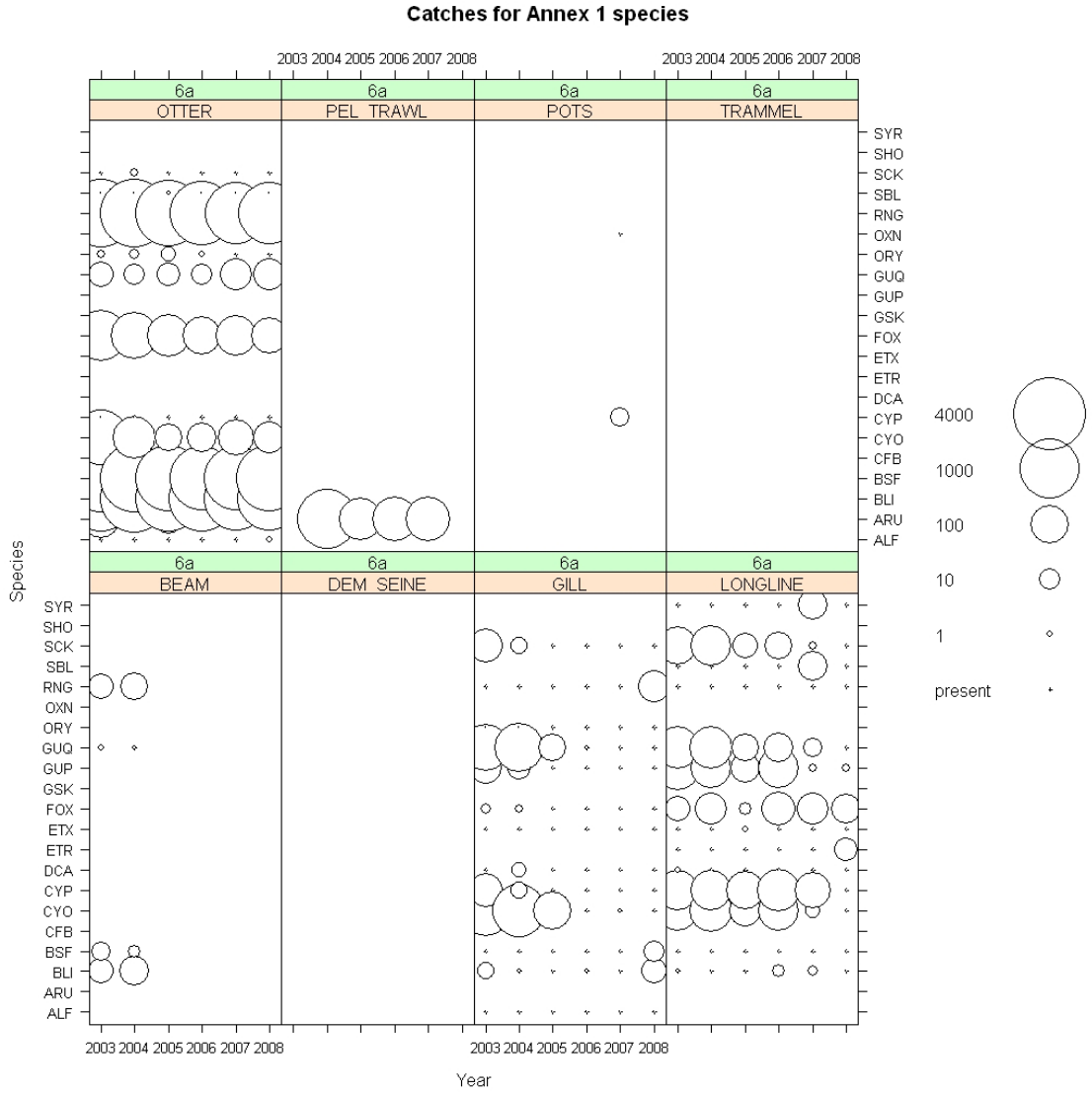

Figure 3.3.7.2 Catches of Annex 1 Deep Sea species (tonnes) 2003-2008 by gear ICES Area VIa

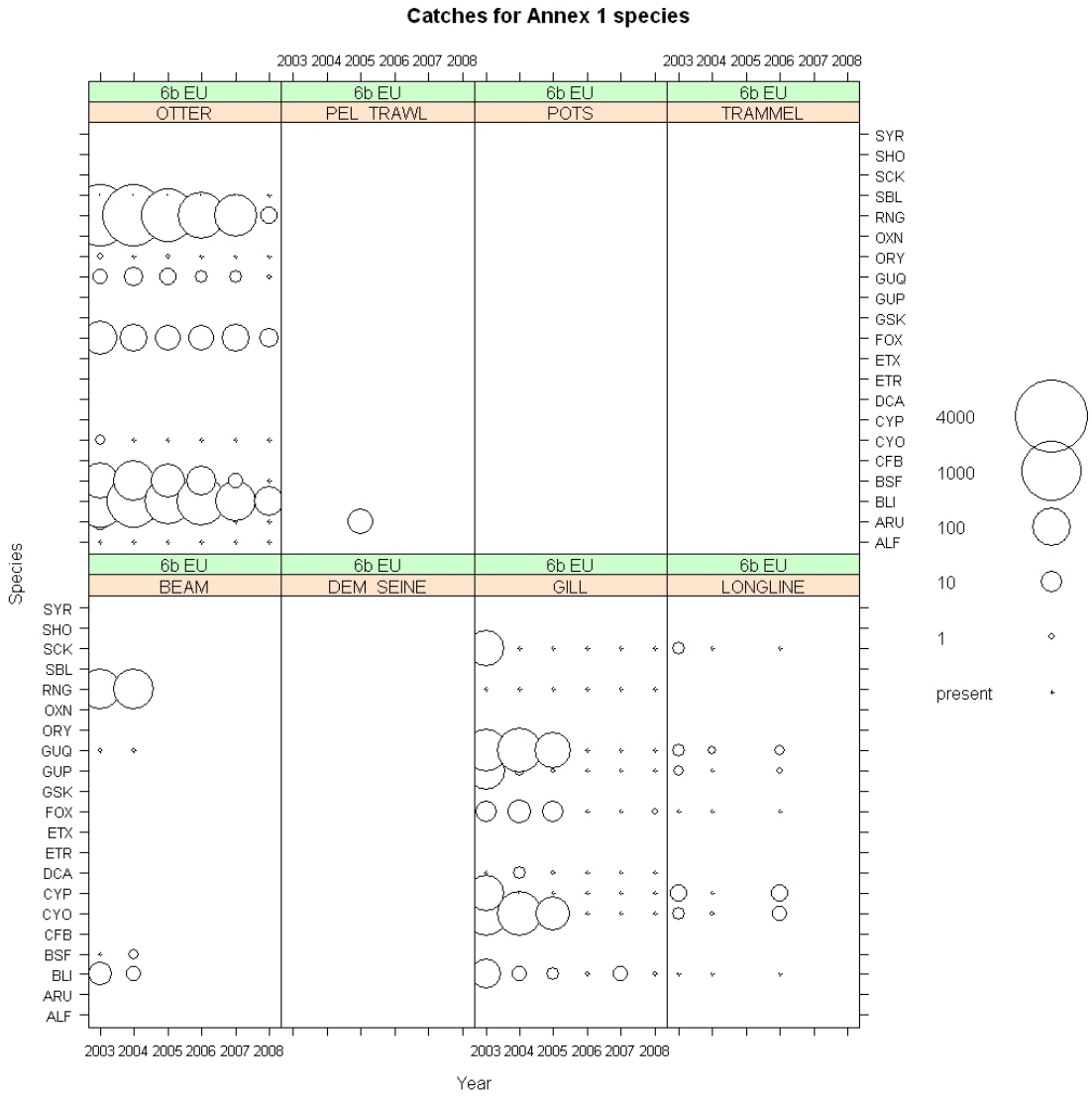

Figure 3.3.7.3 Catches of Annex 1 Deep Sea species (tonnes) 2003-2008 by gear ICES Area VIb EU

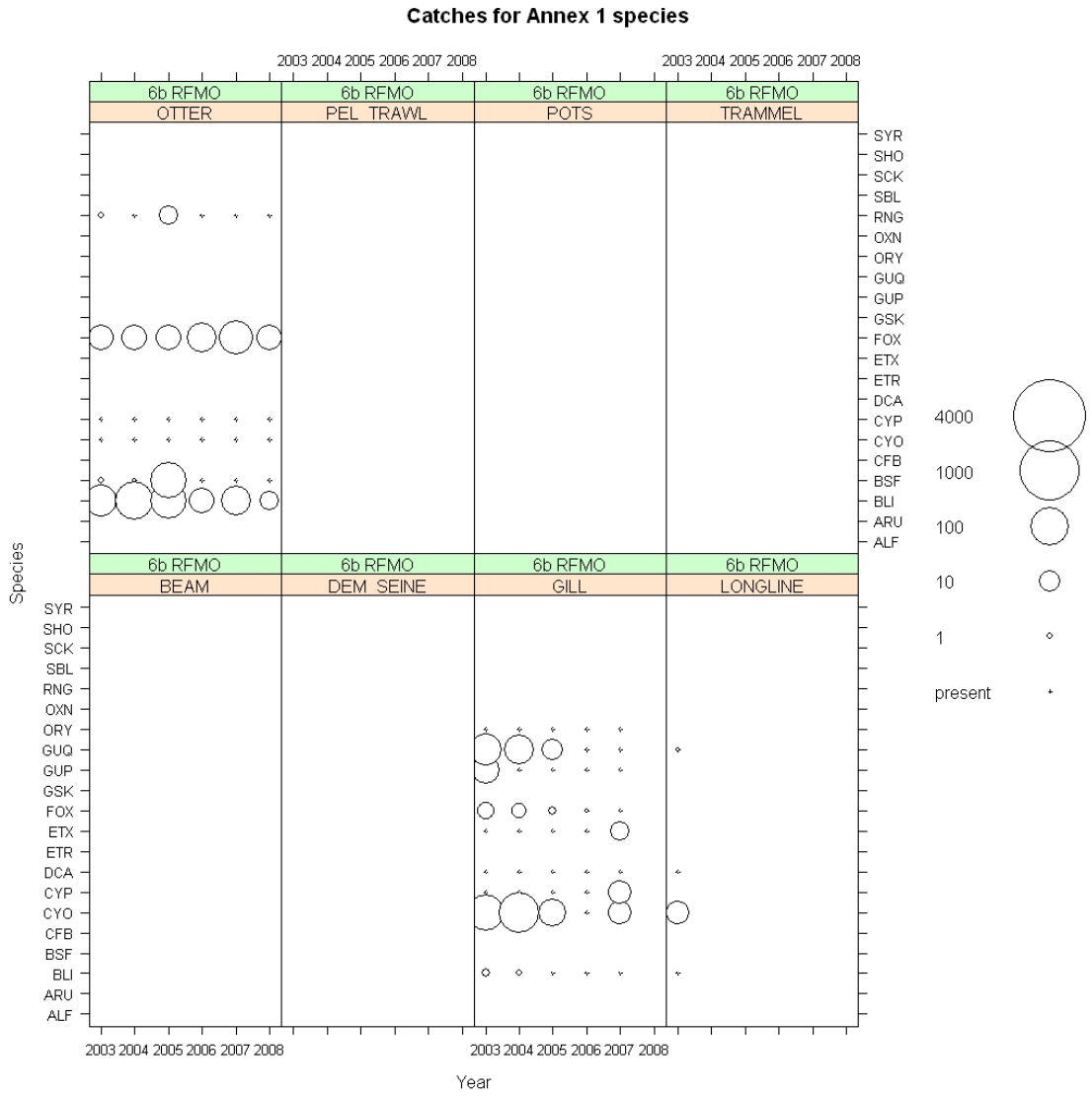

Figure 3.3.7.4 Catches of Annex 1 Deep Sea species (tonnes) 2003-2008 by gear ICES Area VIb RFMO

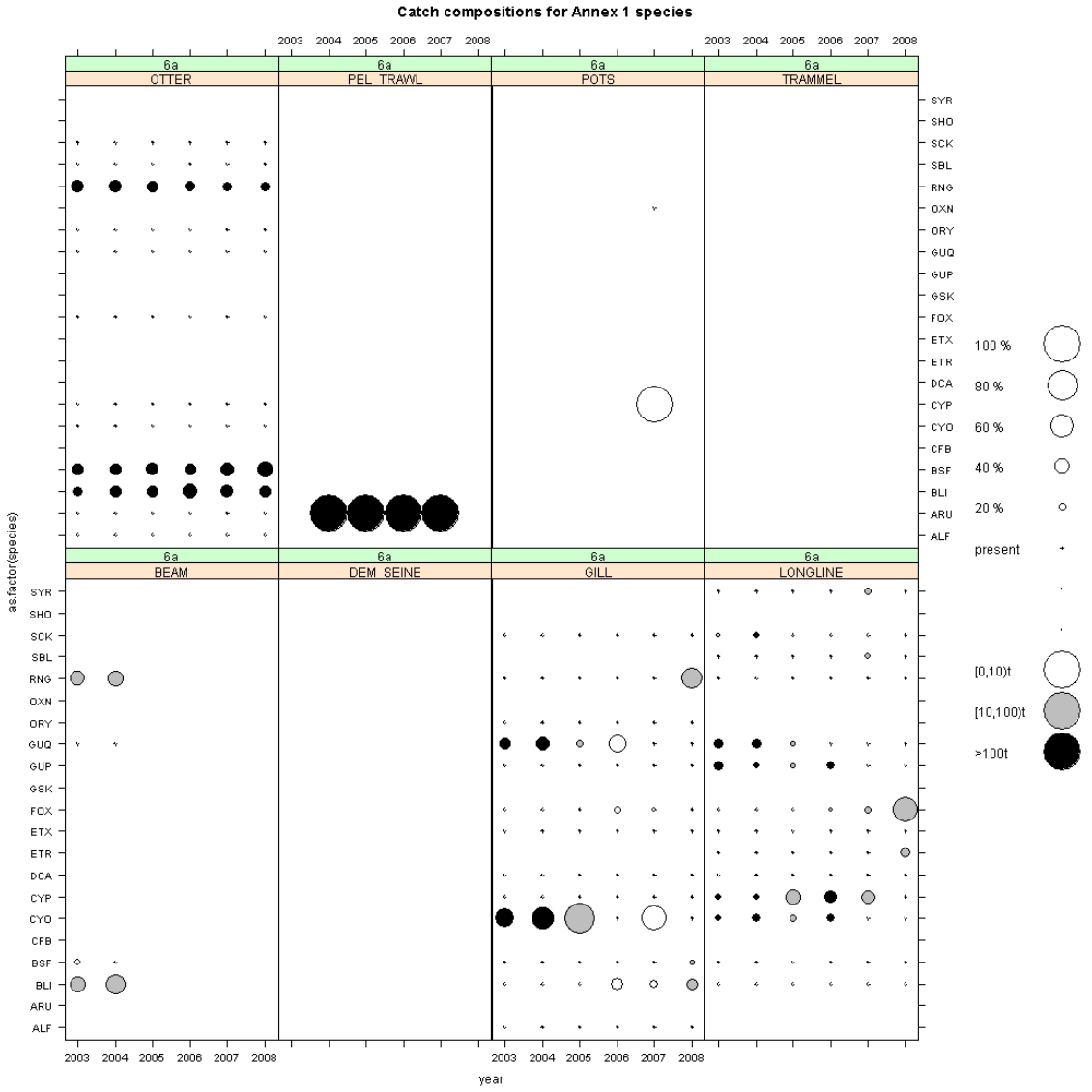

Figure 3.3.7.5 Catch composition for Annex 1 species.

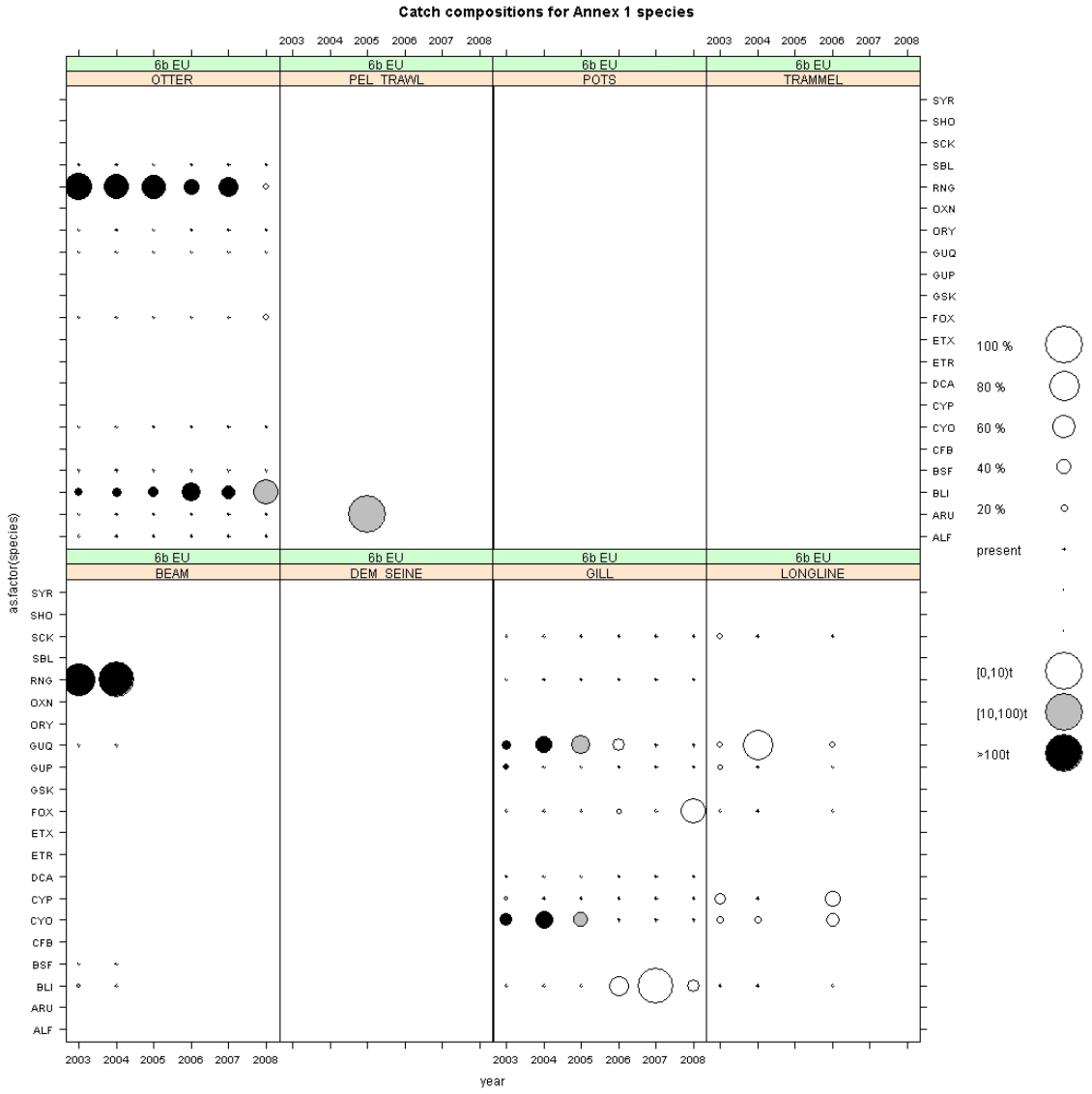

Figure 3.3.7.6 Catch composition for Annex 1 species.

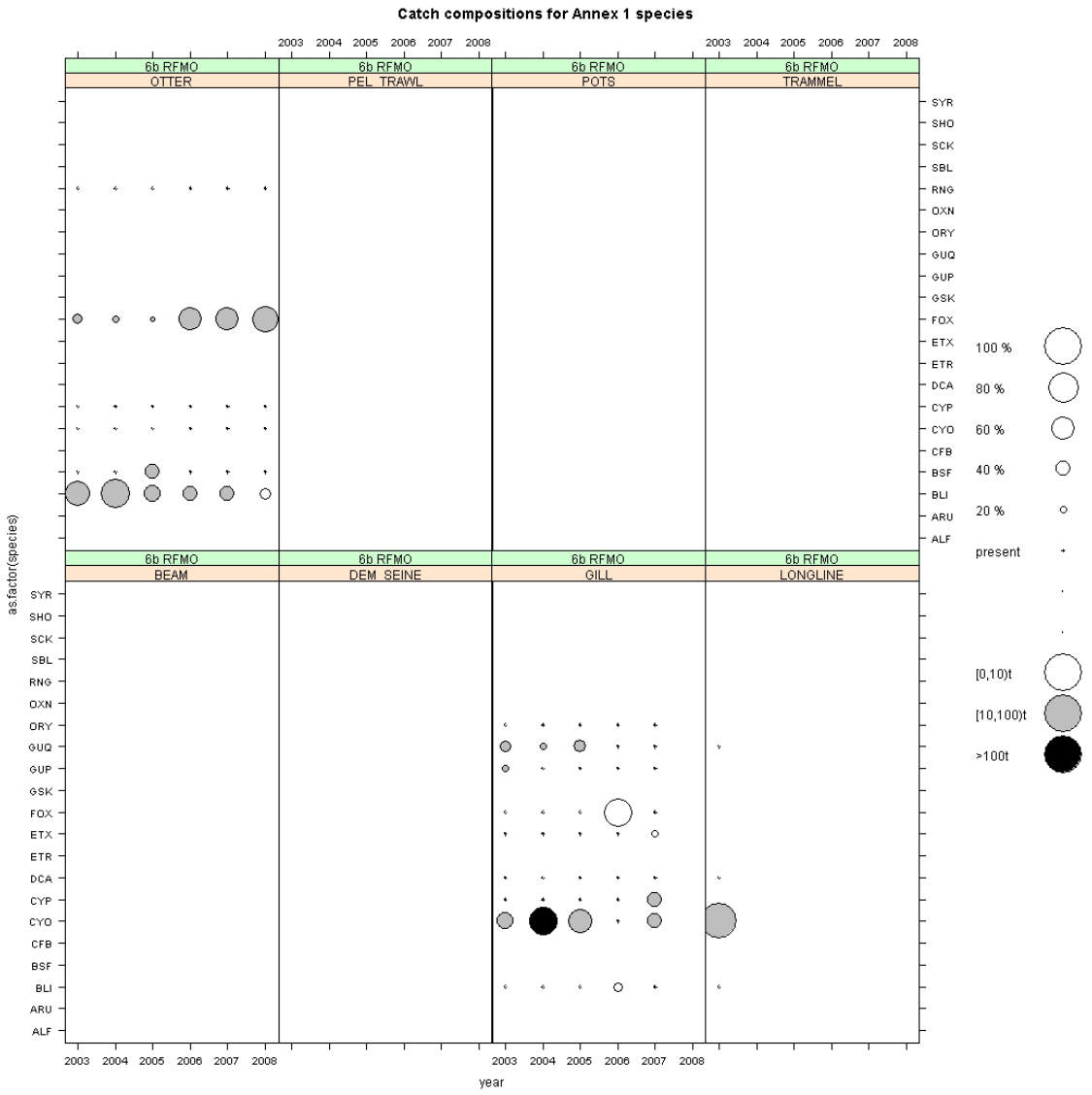

Figure 3.3.7.7 Catch composition for Annex 1 species.

3.3.8. Deep Sea ICES Area VII

Effort

Five countries supplied data indicating activity in this area as shown in Table 3.3.8.1 (there was no information from Spain). Almost all of this effort took place in the EU part of Area VII (Table 3.3.8.2). UK, France and Ireland were the predominant countries with the Netherlands also using effort in this area throughout the time series. Germany used a small amount in the mid-2000s. With the exception of France, effort used by each of the countries has declined by over 50% in the time period and this is particularly striking for the UK which has dropped from over 10million KWdays to just over 4 million. French effort dropped markedly in 2008 but prior to that was relatively stable. Overall, effort in 2008 was just over 40% of the reported value in 2000.

Table 3.3.8.3 and Figure 3.3.8.1 shows trends in effort by country and by main gears illustrating that otter trawls, longlines and gill nets were the most frequently used gears. UK also recorded effort by beam trawls and trammel nets. In general the declines in effort reported above are evident in most gears but longline effort by France and UK has generally increased over the time period and French gill net effort has fluctuated without obvious trend. Netherlands did not report effort by gear.

Table 3.3.8.1 Deep Sea Effort (kwdays) 2000-2008 by country ICES Area VII (total)

YEAR	BEL	DEN	GER	SPN	FRA	IRL	NED	POR	UK	TOT
2000	0	0	0	0	2,703,331	1,576,450	1,146,962	0	10,062,907	15,489,650
2001	0	0	0	0	3,157,233	2,867,608	254,968	0	8,799,176	15,078,985
2002	0	0	0	0	2,413,523	3,033,612	548,962	0	8,517,171	14,513,268
2003	0	0	111,935	0	2,042,903	3,113,903	218,774	0	7,460,012	12,947,527
2004	0	0	318,242	0	1,658,243	2,326,743	778,010	0	7,152,478	12,233,716
2005	0	0	344,403	0	2,449,378	2,157,787	299,936	0	6,405,543	11,657,047
2006	0	0	0	0	2,331,670	1,128,283	22,652	0	4,854,951	8,337,556
2007	0	0	8,398	0	2,054,279	775,332	0	0	5,274,678	8,112,687
2008	0	0	0	0	1,363,926	582,733	53,536	0	4,364,737	6,364,932

Table 3.3.8.2 Deep Sea Effort (kwdays) 2000-2008 by country ICES Area VII (EU)

YEAR	BEL	DEN	GER	SPN	FRA	IRL	NED	POR	UK	TOT
2000	0	0	0	0	2,703,331	1,576,450	1,146,962	0	10,062,907	15,489,650
2001	0	0	0	0	3,157,233	2,867,608	254,968	0	8,795,408	15,075,217
2002	0	0	0	0	2,413,523	3,033,612	548,962	0	8,514,168	14,510,265
2003	0	0	111,935	0	2,042,903	3,113,903	218,774	0	7,459,106	12,946,621
2004	0	0	318,242	0	1,658,243	2,326,743	778,010	0	7,149,959	12,231,197
2005	0	0	344,403	0	2,449,378	2,157,787	299,936	0	6,405,543	11,657,047
2006	0	0	0	0	2,331,670	1,128,283	22,652	0	4,854,951	8,337,556
2007	0	0	8,398	0	2,054,279	775,332	0	0	5,274,678	8,112,687
2008	0	0	0	0	1,363,926	582,733	53,536	0	4,364,737	6,364,932

Table 3.3.8.3 Deep Sea Effort (kwdays) 2000-2008 by gear and country ICES Area VII (total)

GEAR	YEAR	BEL	DEN	GER	SPN	FRA	IRL	NED	POR	UK	TOT
BEAM	2000	0	0	0	0	0	0	0	0	1,741,017	1,741,017
	2001	0	0	0	0	402	59,082	0	0	1,864,540	1,924,024
	2002	0	0	0	0	0	5,372	0	0	2,061,142	2,066,514
	2003	0	0	0	0	0	0	0	0	1,822,346	1,822,346
	2004	0	0	0	0	0	0	0	0	1,670,059	1,670,059
	2005	0	0	0	0	0	17,507	0	0	1,652,637	1,670,144
	2006	0	0	0	0	0	0	0	0	912,204	912,204
	2007	0	0	0	0	0	0	0	0	991,848	991,848
	2008	0	0	0	0	0	0	0	0	795,155	795,155
OTTER	2000	0	0	0	0	2,431,428	1,326,313	0	0	6,029,056	9,786,797
	2001	0	0	0	0	2,636,453	2,468,071	0	0	5,029,120	10,133,644
	2002	0	0	0	0	1,688,218	2,536,986	0	0	4,293,721	8,518,925
	2003	0	0	0	0	1,608,418	2,871,786	0	0	3,186,641	7,666,845
	2004	0	0	0	0	1,287,085	2,304,827	0	0	2,842,104	6,434,016
	2005	0	0	0	0	1,823,455	2,109,455	0	0	2,722,511	6,655,421
	2006	0	0	0	0	1,699,582	1,097,308	0	0	2,650,833	5,447,723
	2007	0	0	0	0	1,508,320	747,910	0	0	2,901,556	5,157,786
	2008	0	0	0	0	1,045,509	578,308	0	0	2,042,229	3,666,046
DEM_SEINE	2000	0	0	0	0	0	0	0	0	57,981	57,981
	2001	0	0	0	0	0	0	0	0	0	0
	2002	0	0	0	0	0	0	0	0	0	0
	2003	0	0	0	0	0	0	0	0	653	653
	2004	0	0	0	0	0	0	0	0	4,123	4,123
	2005	0	0	0	0	0	0	0	0	3,471	3,471
	2006	0	0	0	0	0	0	0	0	0	0
	2007	0	0	0	0	0	0	0	0	31,509	31,509
	2008	0	0	0	0	0	0	0	0	122,875	122,875
LONGLINE	2000	0	0	0	0	26,594	43,647	0	0	396,285	466,526
	2001	0	0	0	0	3,854	69,347	0	0	442,577	515,778
	2002	0	0	0	0	0	65,700	0	0	546,976	612,676
	2003	0	0	0	0	0	73,800	0	0	459,218	533,018
	2004	0	0	0	0	10,209	3,000	0	0	305,419	318,628
	2005	0	0	0	0	1,700	18,950	0	0	352,092	372,742
	2006	0	0	0	0	84,271	0	0	0	615,056	699,327
	2007	0	0	0	0	256,365	2,600	0	0	691,143	950,108
	2008	0	0	0	0	90,016	0	0	0	746,843	836,859
GILL	2000	0	0	0	0	243,769	159,080	0	0	1,741,337	2,144,186
	2001	0	0	0	0	480,985	144,985	0	0	1,338,325	1,964,295
	2002	0	0	0	0	716,883	132,049	0	0	1,512,769	2,361,701
	2003	0	0	111,935	0	407,837	153,327	0	0	1,919,589	2,592,688
	2004	0	0	185,086	0	325,282	18,916	0	0	2,264,729	2,794,013
	2005	0	0	189,137	0	576,314	11,875	0	0	1,605,671	2,382,997
	2006	0	0	0	0	536,240	30,975	0	0	623,470	1,190,685
	2007	0	0	8,398	0	289,594	24,780	0	0	637,652	960,424
	2008	0	0	0	0	228,401	4,425	0	0	638,693	871,519
TRAMMEL	2000	0	0	0	0	0	0	0	0	52,652	52,652
	2001	0	0	0	0	0	0	0	0	50,075	50,075
	2002	0	0	0	0	0	0	0	0	96,677	96,677
	2003	0	0	0	0	0	0	0	0	36,749	36,749
	2004	0	0	0	0	0	0	0	0	16,184	16,184
	2005	0	0	0	0	2,638	0	0	0	18,536	21,174
	2006	0	0	0	0	3,532	0	0	0	53,388	56,920
	2007	0	0	0	0	0	0	0	0	20,970	20,970
	2008	0	0	0	0	0	0	0	0	3,787	3,787

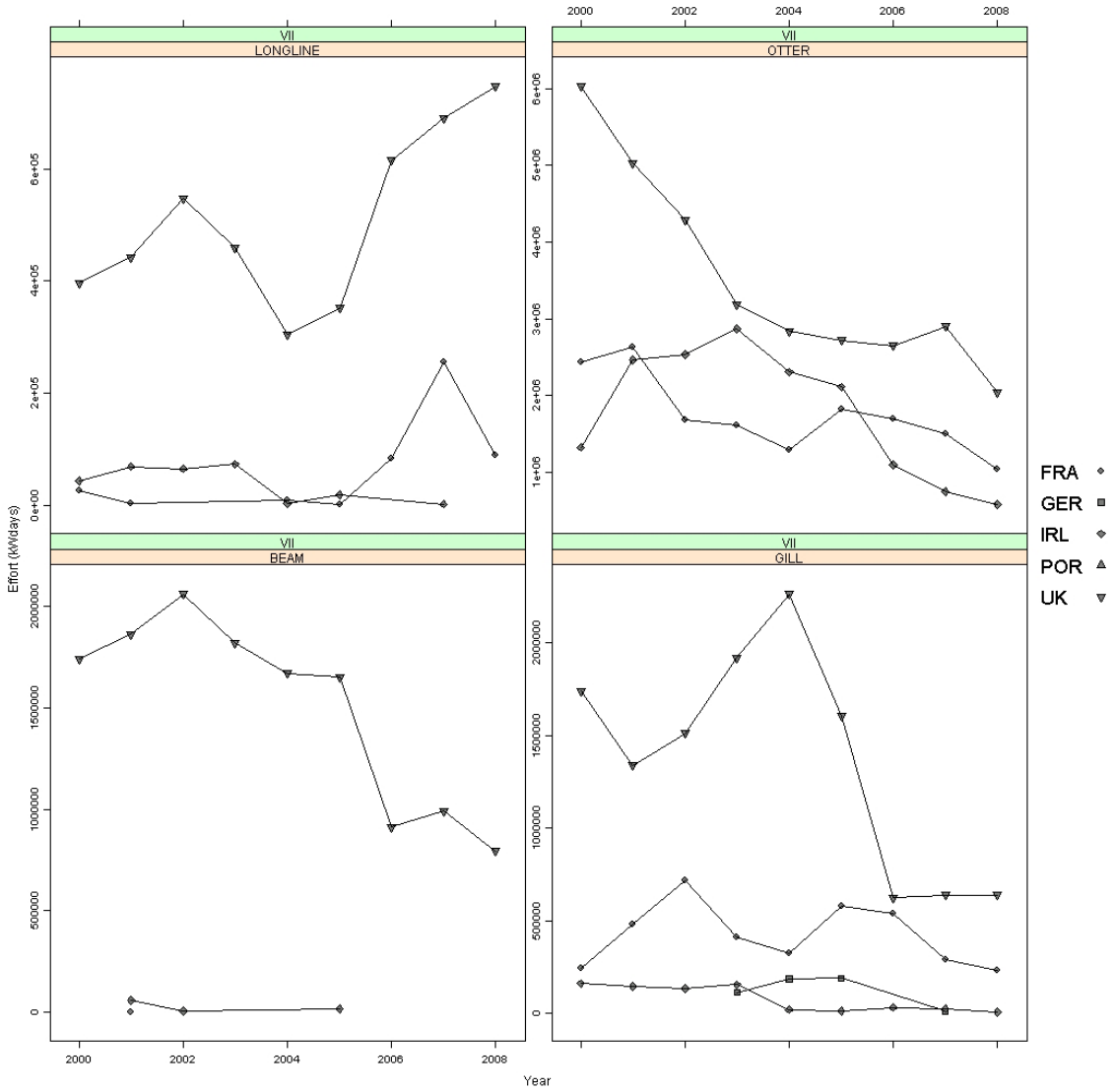

Figure 3.3.8.1 Deep Sea Effort (kwdays) 2000-2008 by gear and country ICES Area VII

Catch and catch composition

ICES Area VII is complex and includes sub-areas located in shallow water as well as extensive areas of deep water. Some of these areas contain areas under management control other than exclusive EU control. Most attention is paid here to the subareas with the most significant landings. A number of areas are not reported in detail owing to the very small or sporadic landings and the following brief notes summarise the main observations.

Subarea VIIa does not actually include deep sea and so it seems likely that the small, sporadic landings of a few species represent reporting errors. Virtually no catch was taken in Subareas VIIc (RFMO waters), VIId and VIIk(RFMO) waters, and on the few occasions when data suggest a landings, this was negligible.

Catches reported from VIIe, VIIf and VIIg were all very small and a feature of these areas was the importance of forkbeards which were taken in a number of gears throughout the time series albeit in very small quantities.

VIIb

This area is one of the more important for deepsea catches and a variety of species are taken (Figure 3.8.3.2). In the trawl fishery, orange roughy, roundnose grenadier and black scabbard are all taken although catches of these have declined as one would expect with general Deep Sea (> 500 m) effort reduction. Otter trawl catches are dominated, however by forkbeards (Figure 3.8.3.7) and these have remained steady – perhaps reflecting continuing or increased effort in upper slope areas (< 500 m). Gill nets and longlines have similar catch compositions reflecting their operation in deeper waters and comprising a number of the shark species. Shark landings by gillnet have declined in recent years but the significant landings of the gulper sharks and various dogfish species by longlines, do not show such an obvious decline

VIIc.EU

A similar picture is evident in VIIc (Figures 3.8.3.3 and 3.8.3.8) with a variety of species taken by otter trawls. Again there is evidence of recent declines in catch and in this area, the drop in orange roughy catches is very obvious; this follows a period of large catches by the Irish fleet off the Porcupine Bank in the early 2000s. Deepwater sharks again predominate in the gill net and longline fisheries although in this area catches have been low in the last couple of years in both gears and have been generally more sporadic in longlines.

VIIh

In VIIh (Figures 3.8.3.4 and 3.8.3.9) modest catches (<100 tonnes) are made in trawls and very small catches are reported for gill nets and longlines. There is some evidence of declining catches in the last couple of years but the small amounts make further comment difficult. Black scabbardfish is the main target here for trawling with some grenadier. The blue ling reported is almost certainly not blue ling (M. dipterygia), but the other more southerly species of ling M. macropthalma.

VIIi EU

Reported landings for VIIi (Figures 3.8.3.5 and 3.8.3.10) give a very similar picture to that for area VIIc (see above). There is general evidence of declining catches and the catch composition in trawls is rather different to that in gill nets and longlines.

VIIk EU

This area is similar again to VIIc. Here, however, the collapse of orange roughy (discovered in the porcupine slope area in the early 2000's) is even more noticeable (Figures 3.8.3.6 and 3.8.3.11). there are also marked declines in landings of sharks by gill nets and to a lesser extent long-lines.

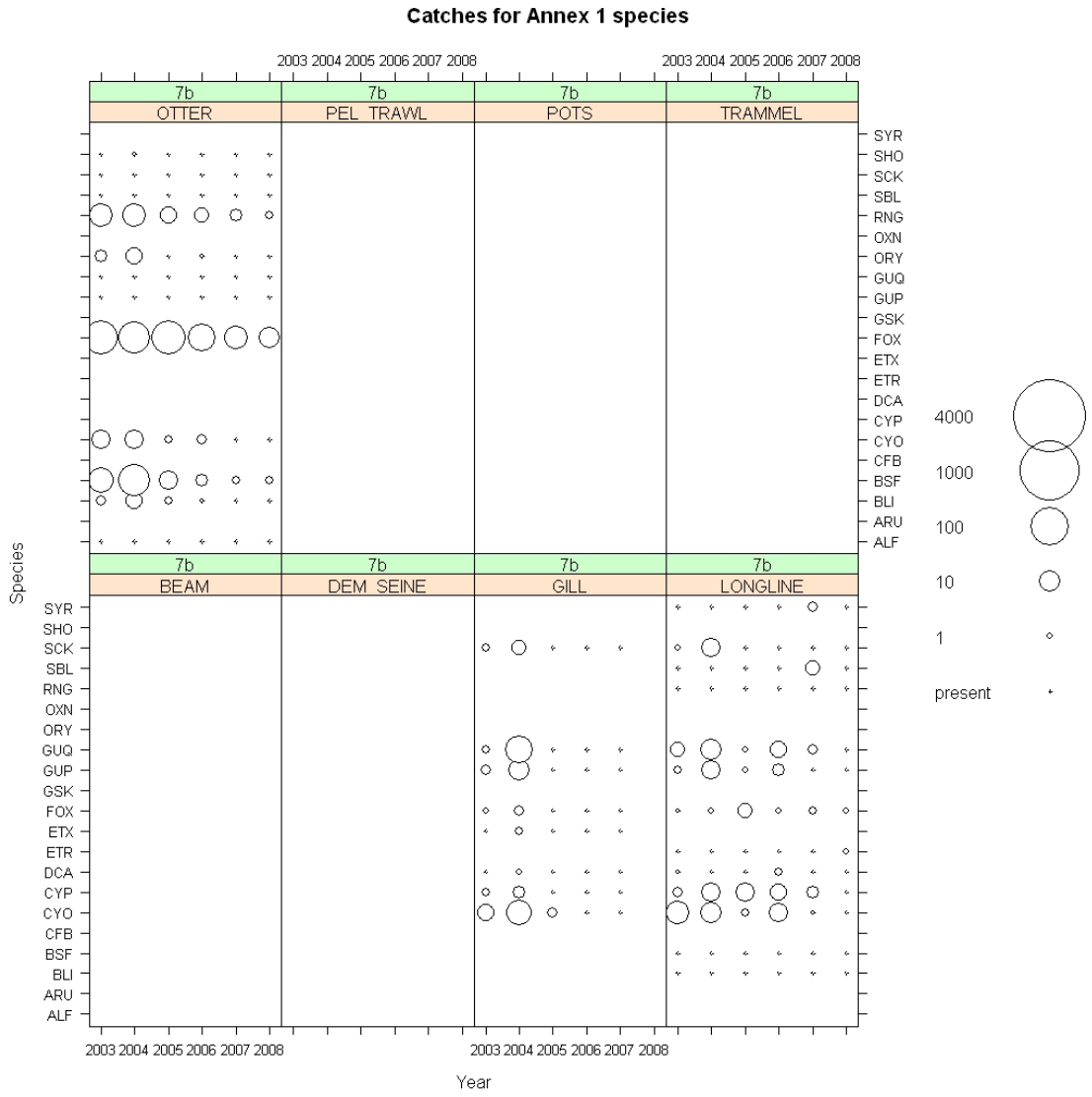

Figure 3.3.8.2 Catches of Annex 1 Deep Sea species (tonnes) 2003-2008 by gear ICES Area VIIb

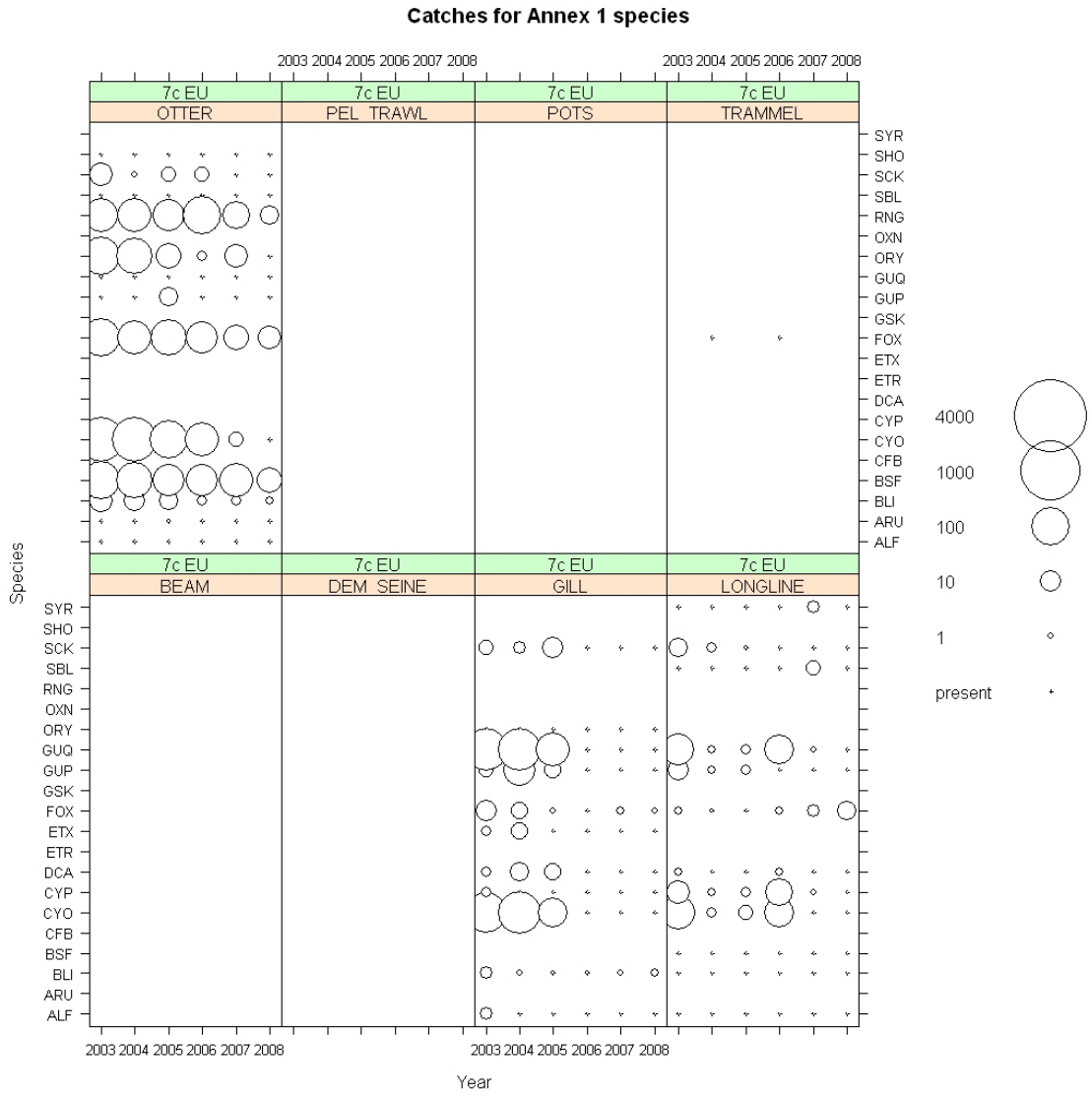

Figure 3.3.8.3 Catches of Annex 1 Deep Sea species (tonnes) 2003-2008 by gear ICES Area VIIc EU

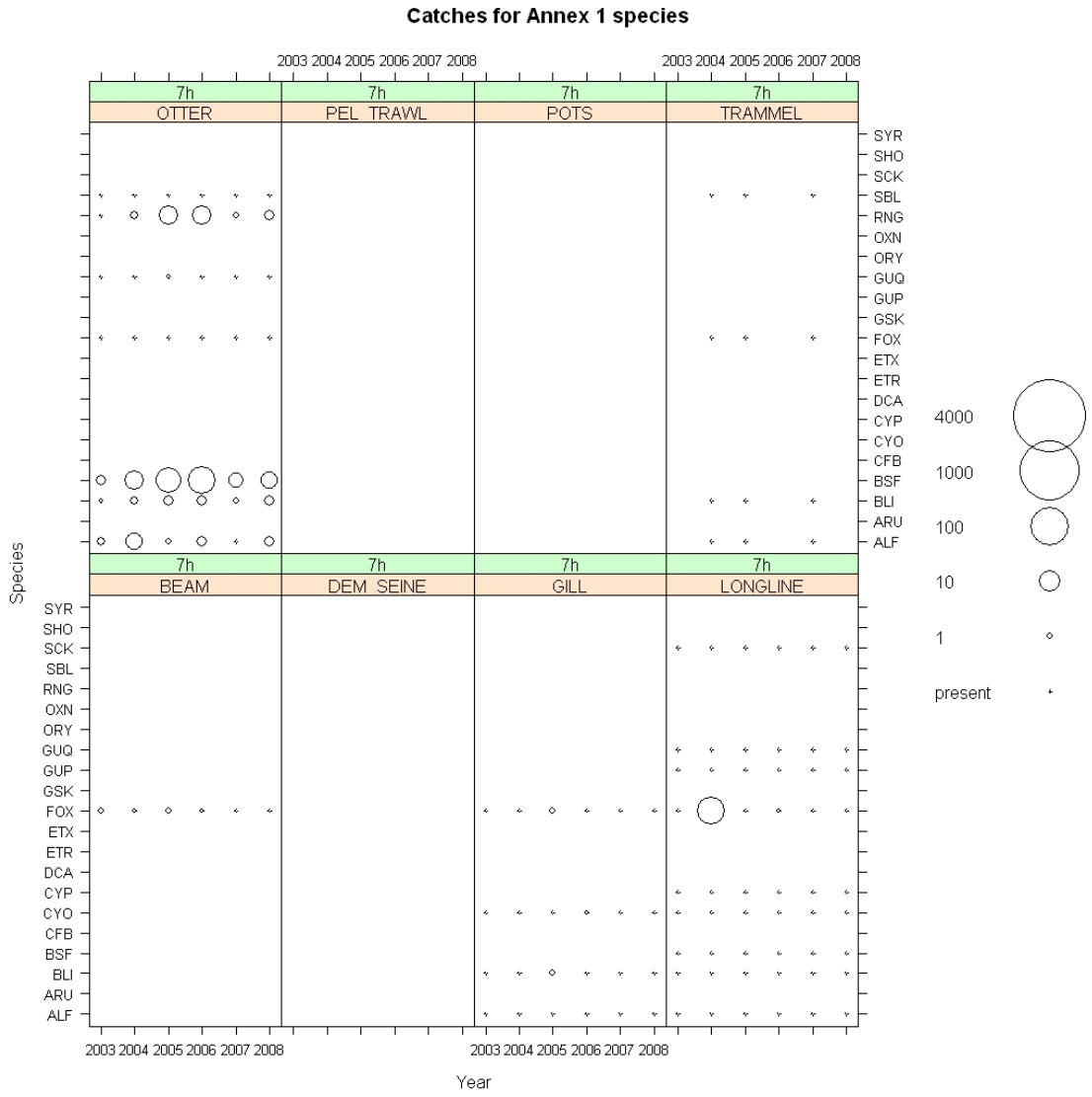

Figure 3.3.8.4 Catches of Annex 1 Deep Sea species (tonnes) 2003-2008 by gear ICES Area VIIh

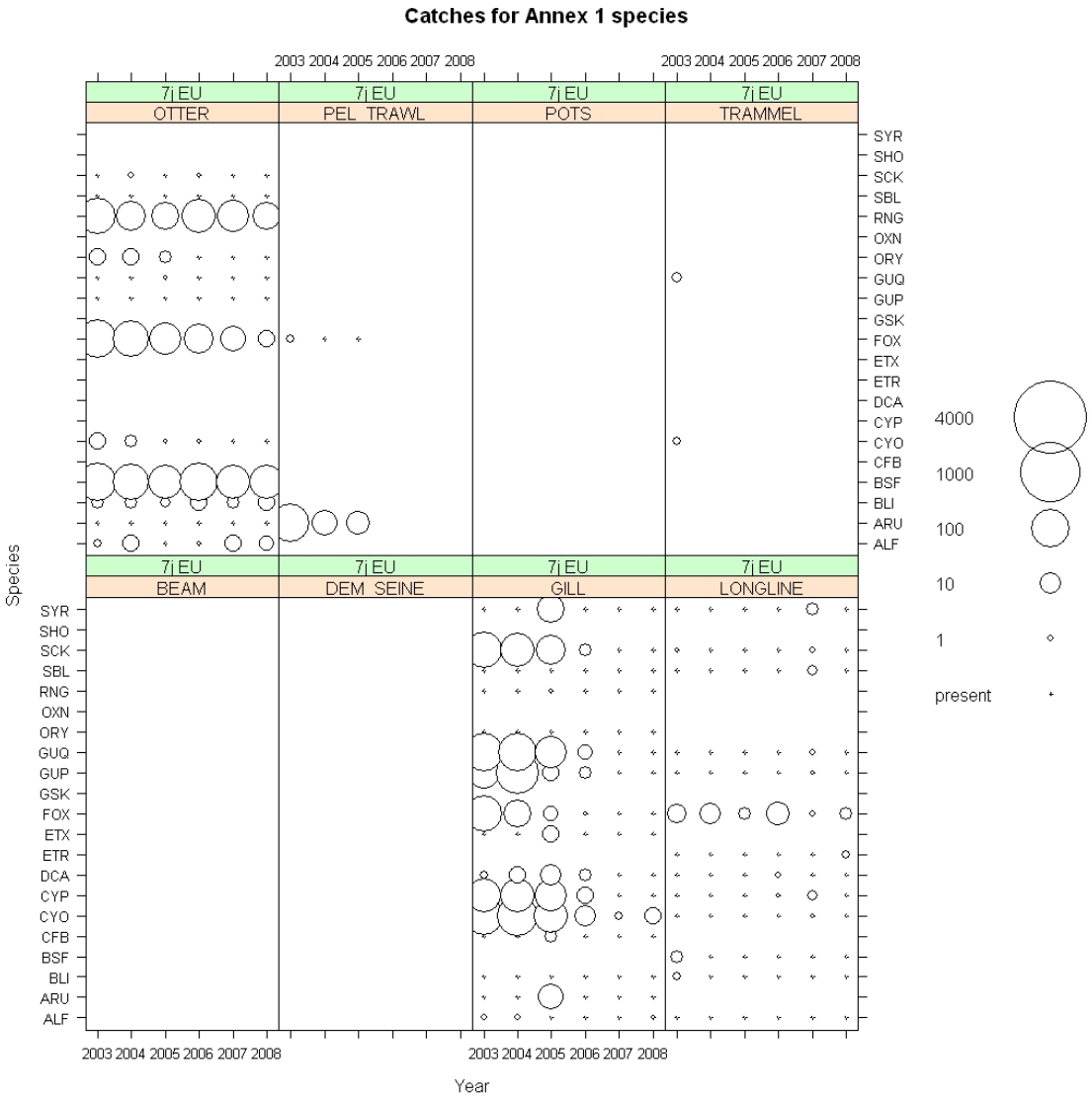

Figure 3.3.8.5 Catches of Annex 1 Deep Sea species (tonnes) 2003-2008 by gear ICES Area VIIi EU

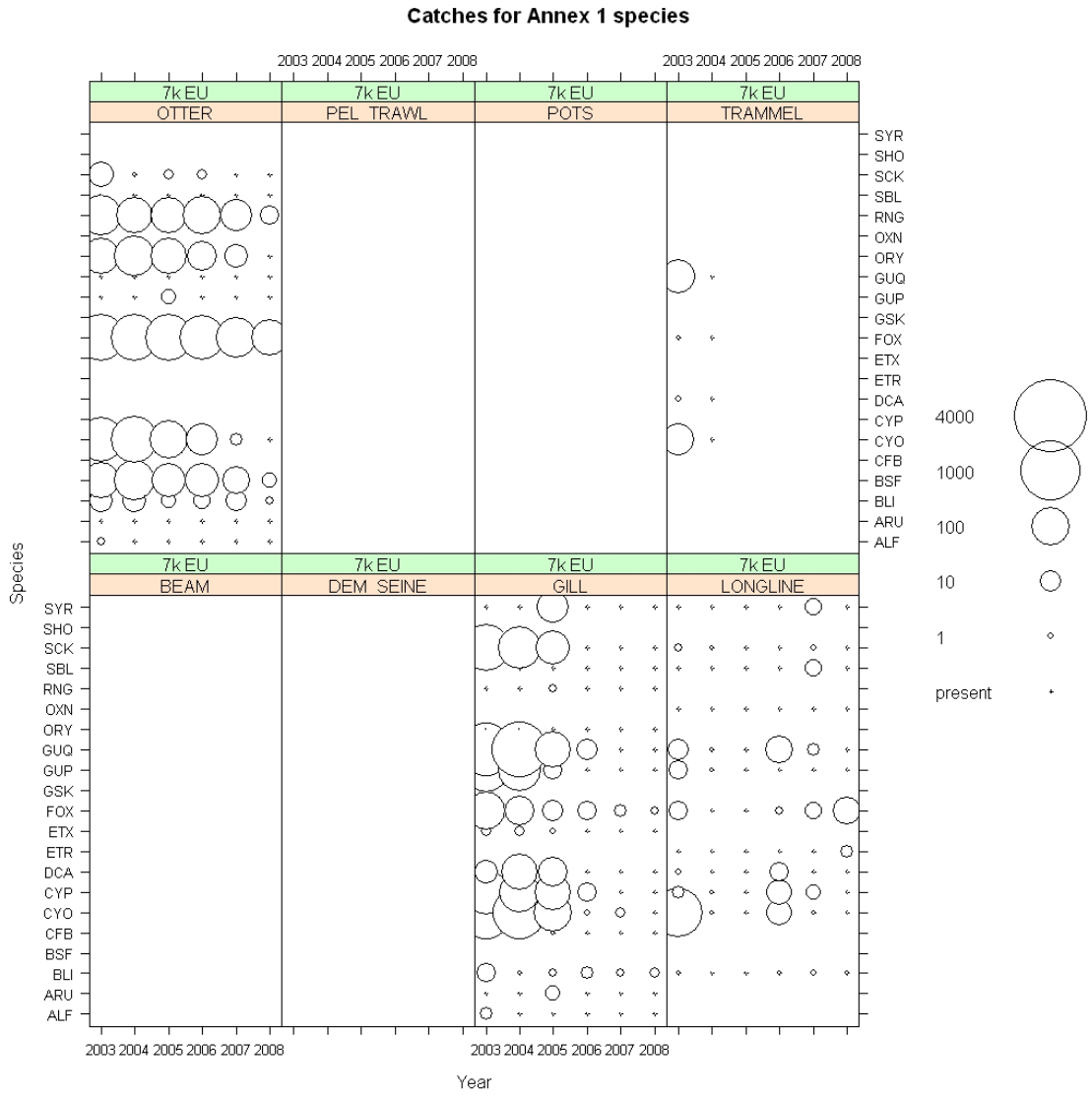

Figure 3.3.8.6 Catches of Annex 1 Deep Sea species (tonnes) 2003-2008 by gear ICES Area VIIk EU

Catch Composition

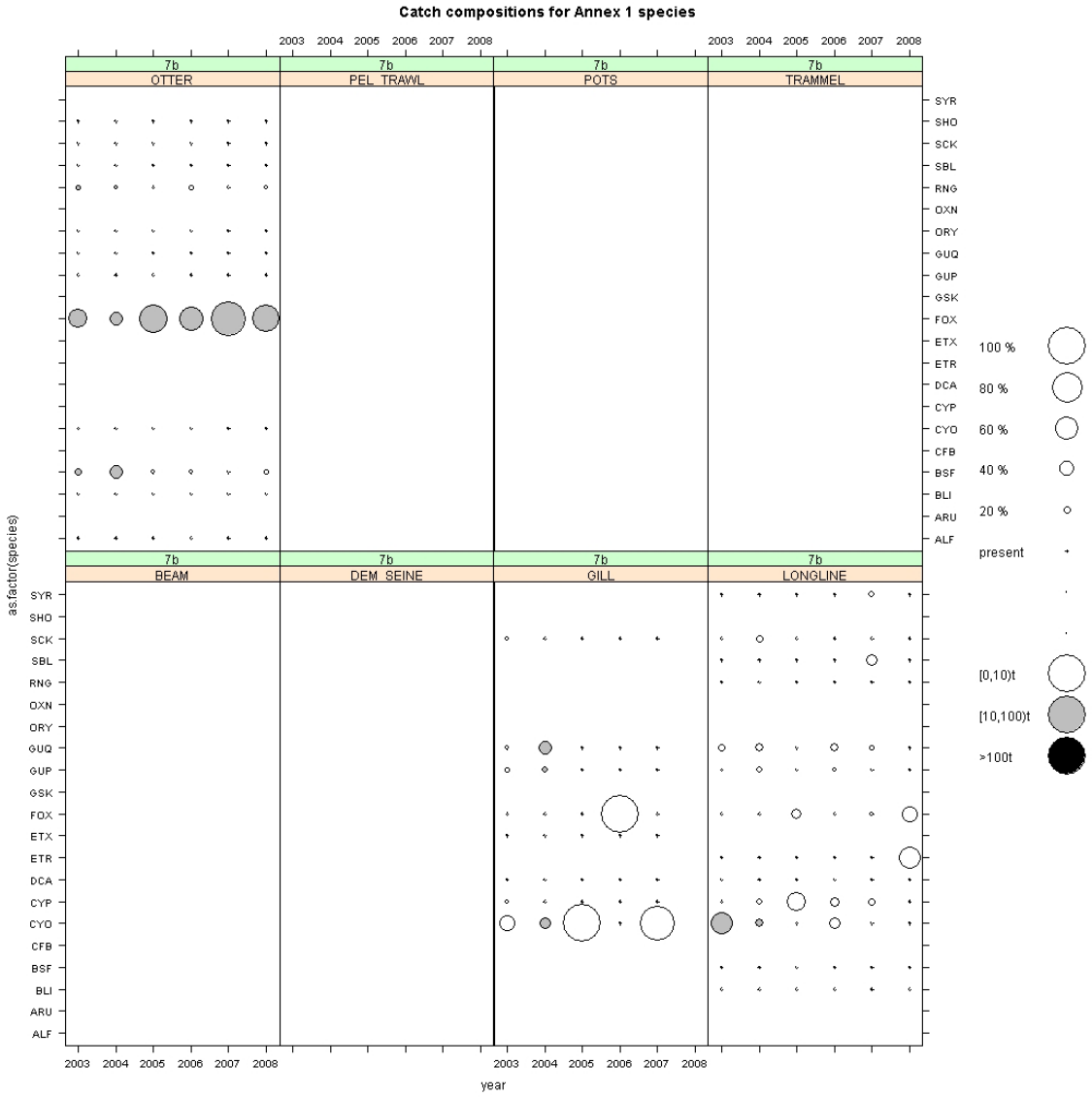

Figure 3.3.8.7 Catch composition for Annex 1 species.

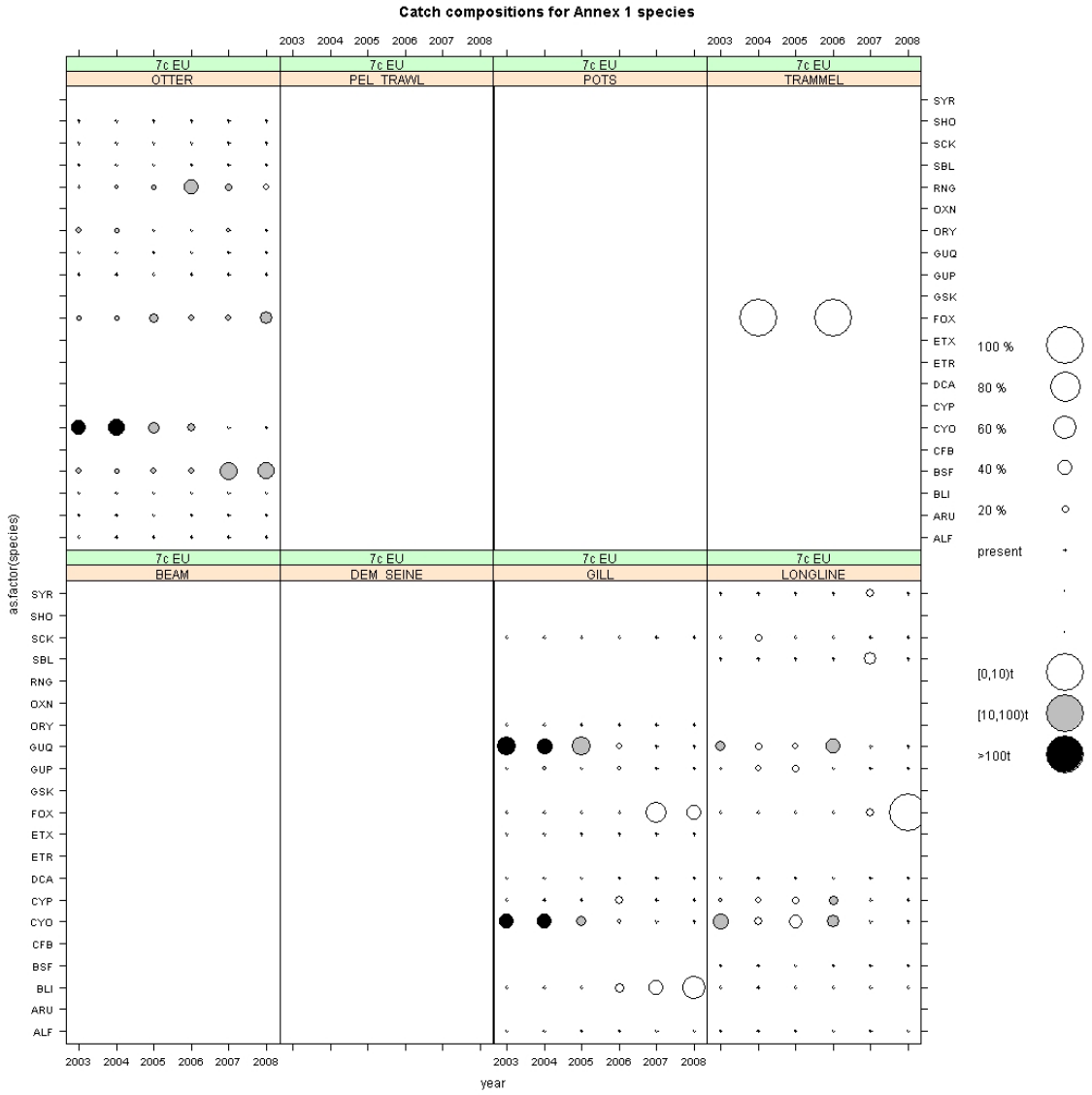

Figure 3.3.8.8 Catch composition for Annex 1 species.

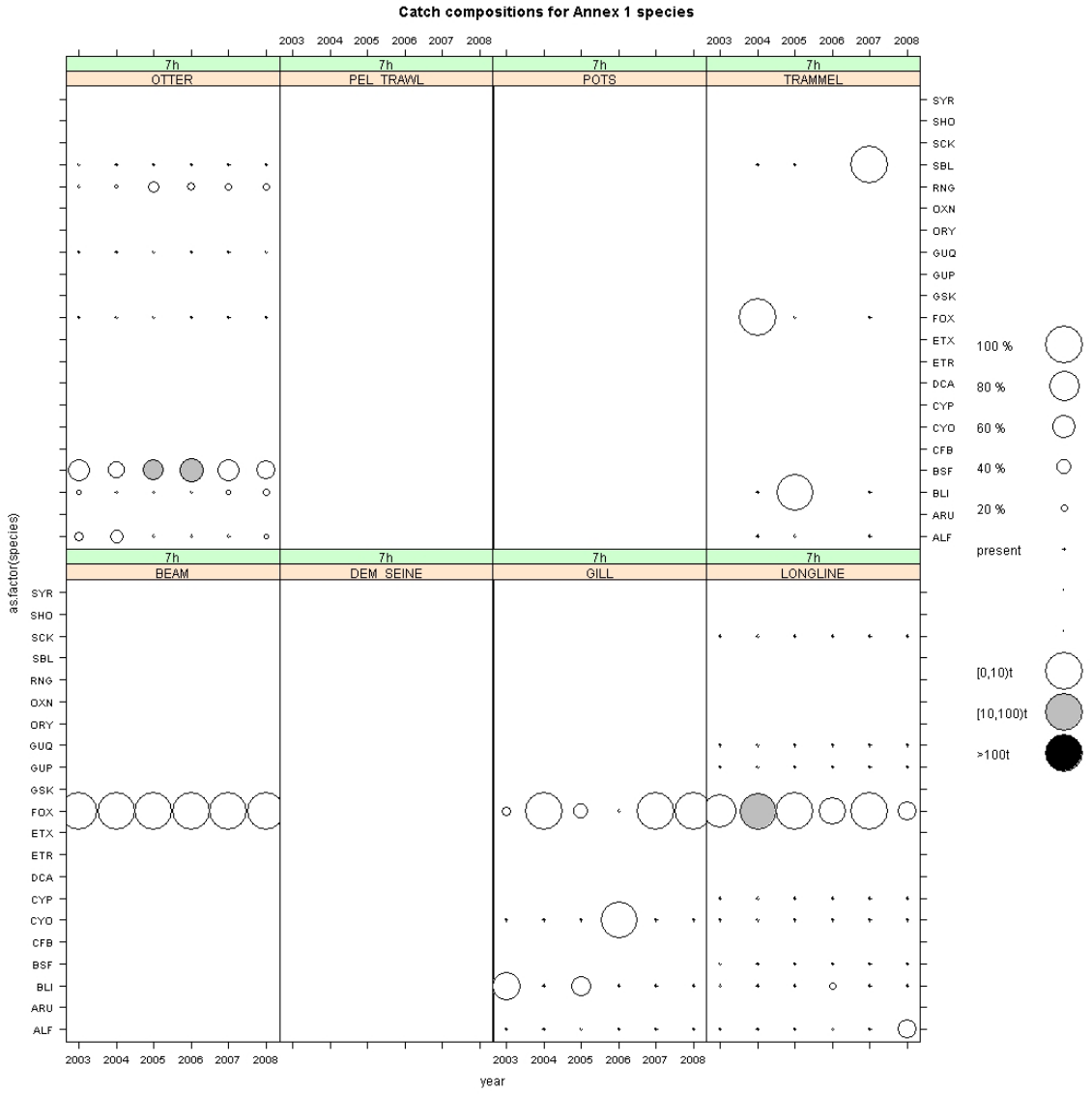

Figure 3.3.8.9 Catch composition for Annex 1 species.

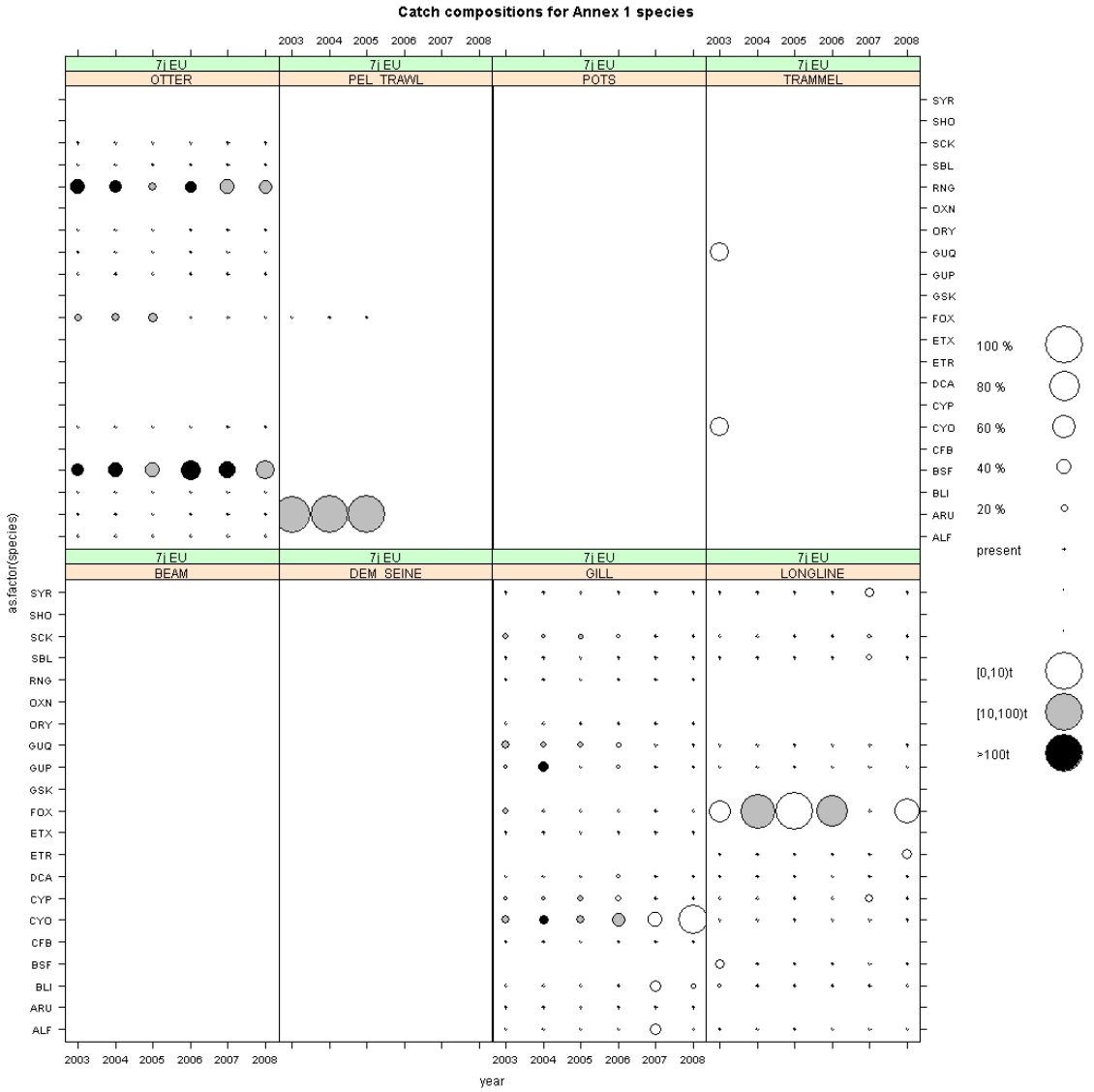

Figure 3.3.8.10 Catch composition for Annex 1 species.

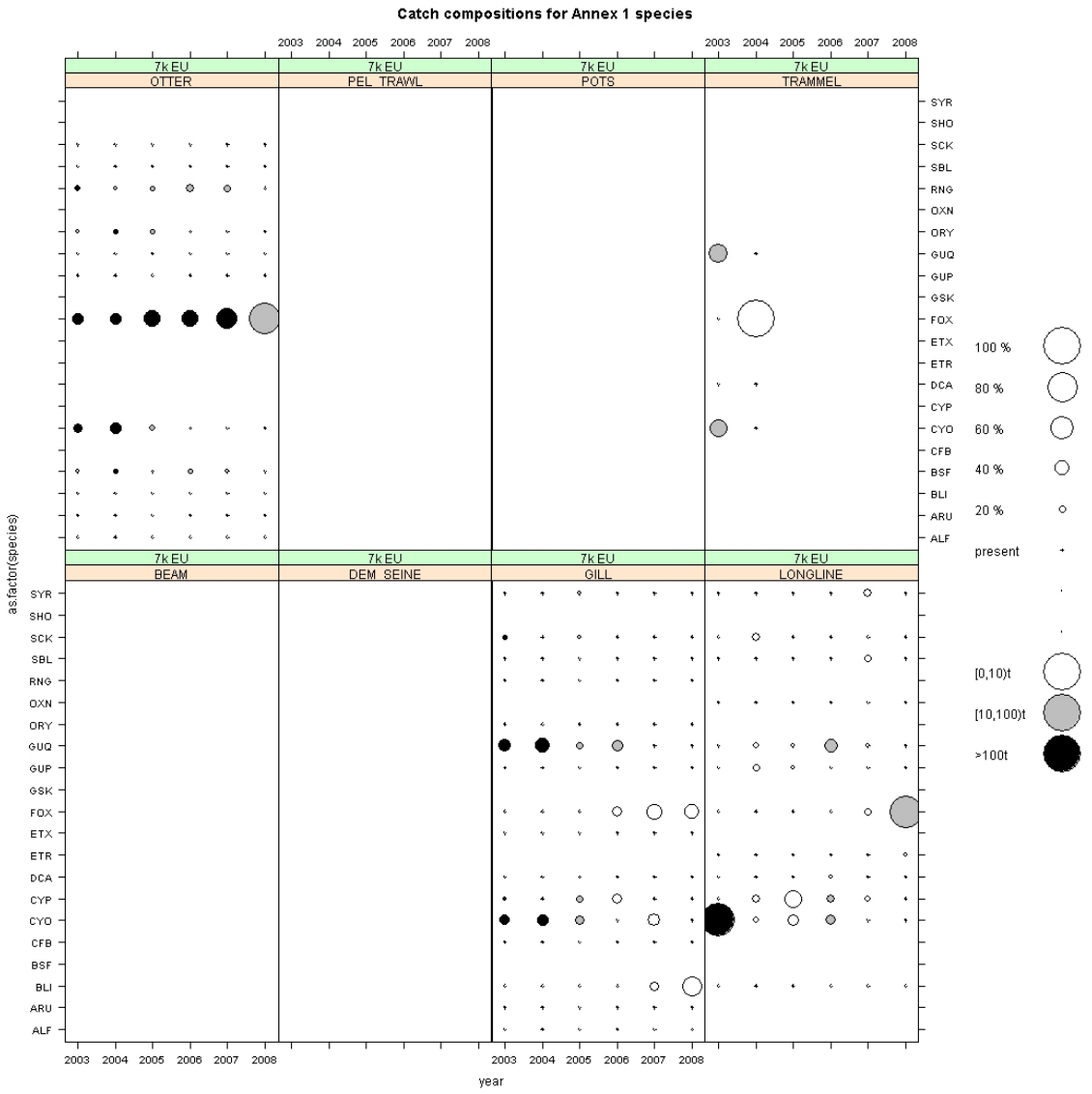

Figure 3.3.8.11 Catch composition for Annex 1 species.

3.3.9. Deep Sea ICES Area VIII

Effort

Most of the effort in this area was contributed by three countries as shown in Table 3.3.9.1 (there was no information from Spain). Almost all of this effort took place in the EU part of Area VIII (Table 3.3.9.2). UK, France and Netherlands were the predominant countries with small amounts from Ireland and Germany. Netherlands effort declined to zero in 2007, whereas UK and French UK increased to the mid 2000s but has since declined. Overall, effort in 2008 was about the same as the reported value in 2000.

Table 3.3.9.3 and Figure 3.3.9.1 shows trends in effort by country and by main gears illustrating that otter trawls were the most important followed by gill nets, longline and trammel nets.. In general the

pattern of peak effort in the mid 2000s followed by decline is evident in all gears except trammel where the recent period shows the highest values.. Netherlands did not report effort by gear.

Table 3.3.9.1 Deep Sea Effort (kwdays) 2000-2008 by country ICES Area VIII (total)

YEAR	BEL	DEN	GER	SPN	FRA	IRL	NED	POR	UK	TOT
2000	0	0	0	0	262,250	23,400	328,154	0	5,971	619,775
2001	0	0	0	0	258,093	0	200,158	0	20,365	478,616
2002	0	0	0	0	559,494	2,500	734,687	0	119,176	1,415,857
2003	0	0	0	0	460,588	0	49,974	0	87,112	597,674
2004	0	0	22,626	0	502,579	0	22,284	0	195,594	743,083
2005	0	0	0	0	1,065,274	0	26,400	0	131,379	1,223,053
2006	0	0	0	0	845,161	0	35,596	0	386,809	1,267,566
2007	0	0	0	0	554,895	0	0	0	108,637	663,532
2008	0	0	0	0	450,437	0	0	0	107,732	558,169

Table 3.3.9.2 Deep Sea Effort (kwdays) 2000-2008 by country ICES Area VIII (EU)

YEAR	BEL	DEN	GER	SPN	FRA	IRL	NED	POR	UK	TOT
2000	0	0	0	0	262,250	23,400	328,154	0	5,971	619,775
2001	0	0	0	0	258,093	0	200,158	0	20,365	478,616
2002	0	0	0	0	559,494	2,500	734,687	0	119,176	1,415,857
2003	0	0	0	0	460,588	0	49,974	0	87,112	597,674
2004	0	0	22,626	0	502,579	0	22,284	0	195,594	743,083
2005	0	0	0	0	1,065,274	0	26,400	0	131,379	1,223,053
2006	0	0	0	0	845,161	0	35,596	0	351,815	1,232,572
2007	0	0	0	0	554,895	0	0	0	108,637	663,532
2008	0	0	0	0	450,437	0	0	0	102,356	552,793

Table 6.3.9.3 Deep Sea Effort (kwdays) 2000-2008 by gear and country ICES Area VIII (total)

GEAR	YEAR	BEL	DEN	GER	SPN	FRA	IRL	NED	POR	UK	TOT
BEAM	2000	0	0	0	0	0	0	0	0	0	0
	2001	0	0	0	0	0	0	0	0	0	0
	2002	0	0	0	0	0	0	0	0	0	0
	2003	0	0	0	0	0	0	0	0	0	0
	2004	0	0	0	0	0	0	0	0	0	0
	2005	0	0	0	0	0	0	0	0	0	0
	2006	0	0	0	0	0	0	0	0	0	0
	2007	0	0	0	0	0	0	0	0	0	0
	2008	0	0	0	0	0	0	0	0	880	880
OTTER	2000	0	0	0	0	206,629	0	0	0	0	206,629
	2001	0	0	0	0	220,474	0	0	0	0	220,474
	2002	0	0	0	0	508,807	0	0	0	0	508,807
	2003	0	0	0	0	333,414	0	0	0	0	333,414
	2004	0	0	0	0	439,674	0	0	0	0	439,674
	2005	0	0	0	0	965,354	0	0	0	0	965,354
	2006	0	0	0	0	620,957	0	0	0	0	620,957
	2007	0	0	0	0	325,883	0	0	0	0	325,883
	2008	0	0	0	0	392,762	0	0	0	0	392,762
LONGLINE	2000	0	0	0	0	3,421	0	0	0	5,971	9,392
	2001	0	0	0	0	2,515	0	0	0	20,365	22,880
	2002	0	0	0	0	592	0	0	0	63,052	63,644
	2003	0	0	0	0	0	0	0	0	87,112	87,112
	2004	0	0	0	0	0	0	0	0	105,982	105,982
	2005	0	0	0	0	1,133	0	0	0	64,364	65,497
	2006	0	0	0	0	1,488	0	0	0	73,441	74,929
	2007	0	0	0	0	88	0	0	0	51,584	51,672
	2008	0	0	0	0	15,430	0	0	0	41,960	57,390
GILL	2000	0	0	0	0	51,161	0	0	0	0	51,161
	2001	0	0	0	0	31,101	0	0	0	0	31,101
	2002	0	0	0	0	26,222	0	0	0	2,730	28,952
	2003	0	0	0	0	116,538	0	0	0	0	116,538
	2004	0	0	0	0	59,181	0	0	0	89,612	148,793
	2005	0	0	0	0	80,241	0	0	0	67,015	147,256
	2006	0	0	0	0	201,649	0	0	0	313,368	515,017
	2007	0	0	0	0	216,723	0	0	0	57,053	273,776
	2008	0	0	0	0	35,224	0	0	0	58,969	94,193
TRAMMEL	2000	0	0	0	0	354	0	0	0	0	354
	2001	0	0	0	0	4,003	0	0	0	0	4,003
	2002	0	0	0	0	0	0	0	0	0	0
	2003	0	0	0	0	6,283	0	0	0	0	6,283
	2004	0	0	0	0	3,724	0	0	0	0	3,724
	2005	0	0	0	0	8,690	0	0	0	0	8,690
	2006	0	0	0	0	9,538	0	0	0	0	9,538
	2007	0	0	0	0	8,372	0	0	0	0	8,372
	2008	0	0	0	0	7,021	0	0	0	547	7,568

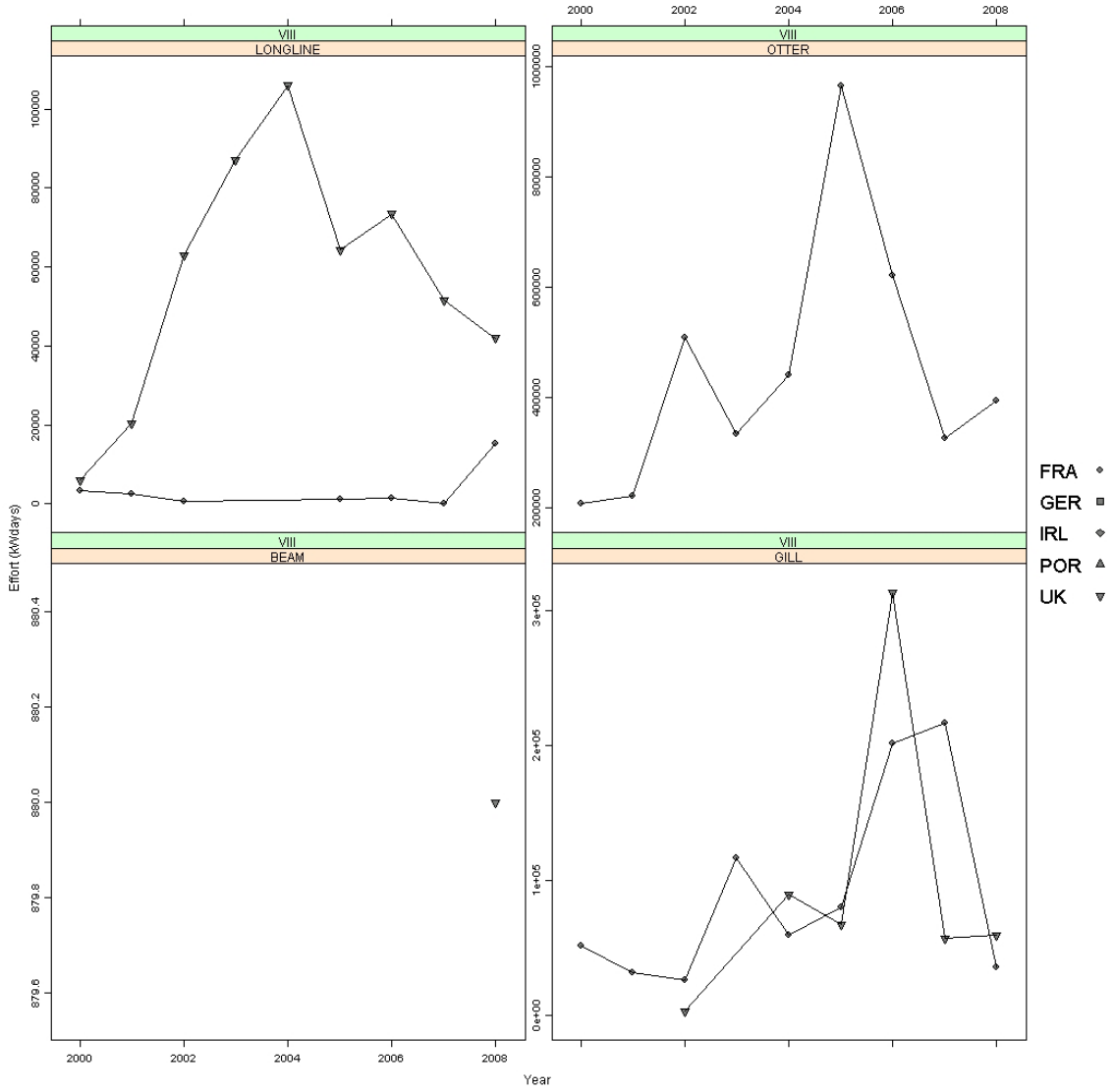

Figure 3.3.9.1 Deep Sea Effort (kwdays) 2000-2008 by gear and country ICES Area VIII

Catch and catch composition

Most catches appear to be taken in ICES areas VIIIa and VIIId (EU) (Figures 3.3.9.2 to 3.3.9.6 and 3.3.9.7 to 3.3.9.11). The otter trawls take predominantly black scabbardfish with some round nosed grenadiers, blue ling and alfonsinoes, the predominant species in gill nets is forkbeards. In VIIId (EU) gill nets also took several shark species. Unlike more northerly areas there is little evidence of declining catches in this area.

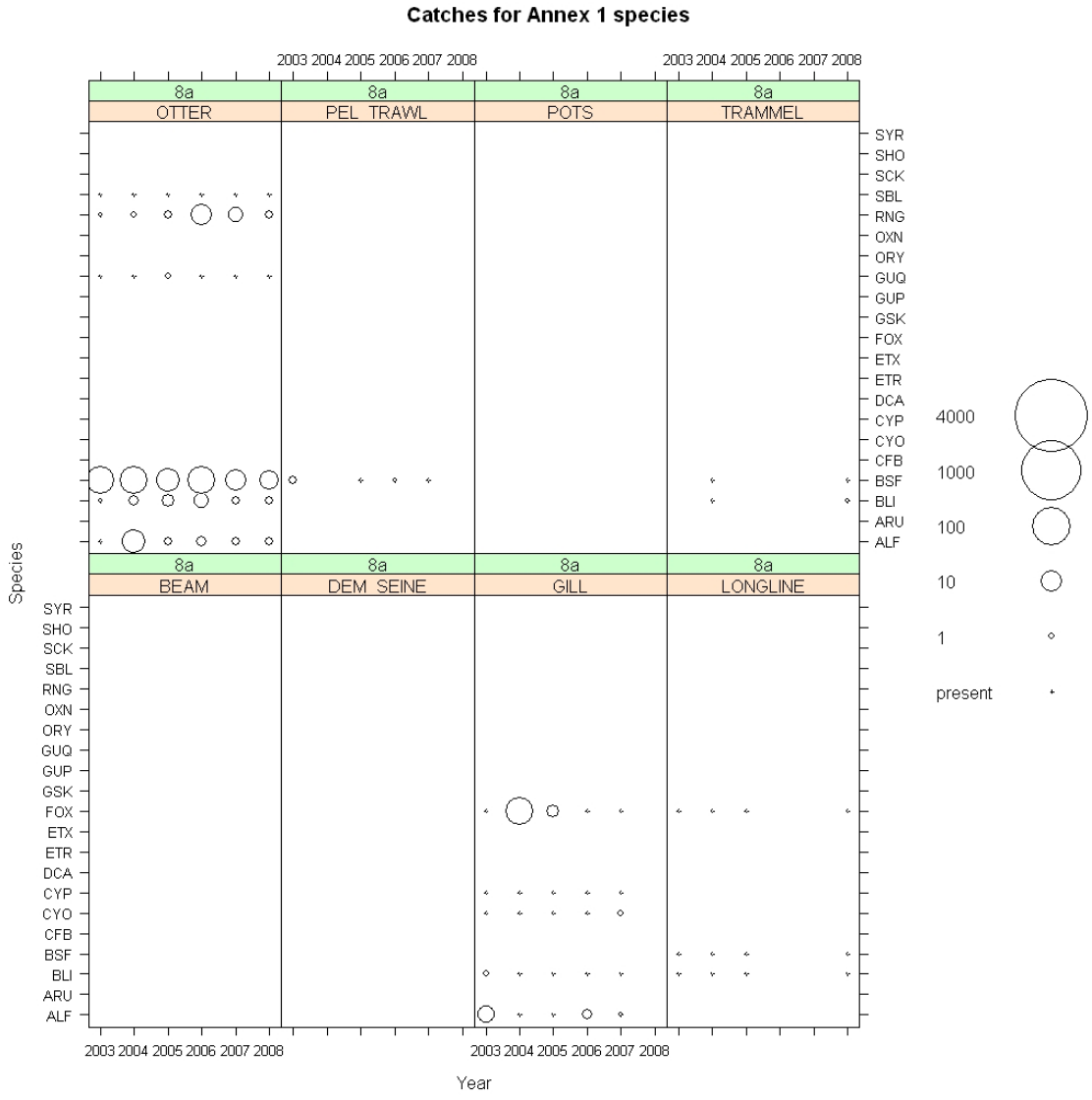

Figure 3.3.9.2 Catches for Annex 1 species.

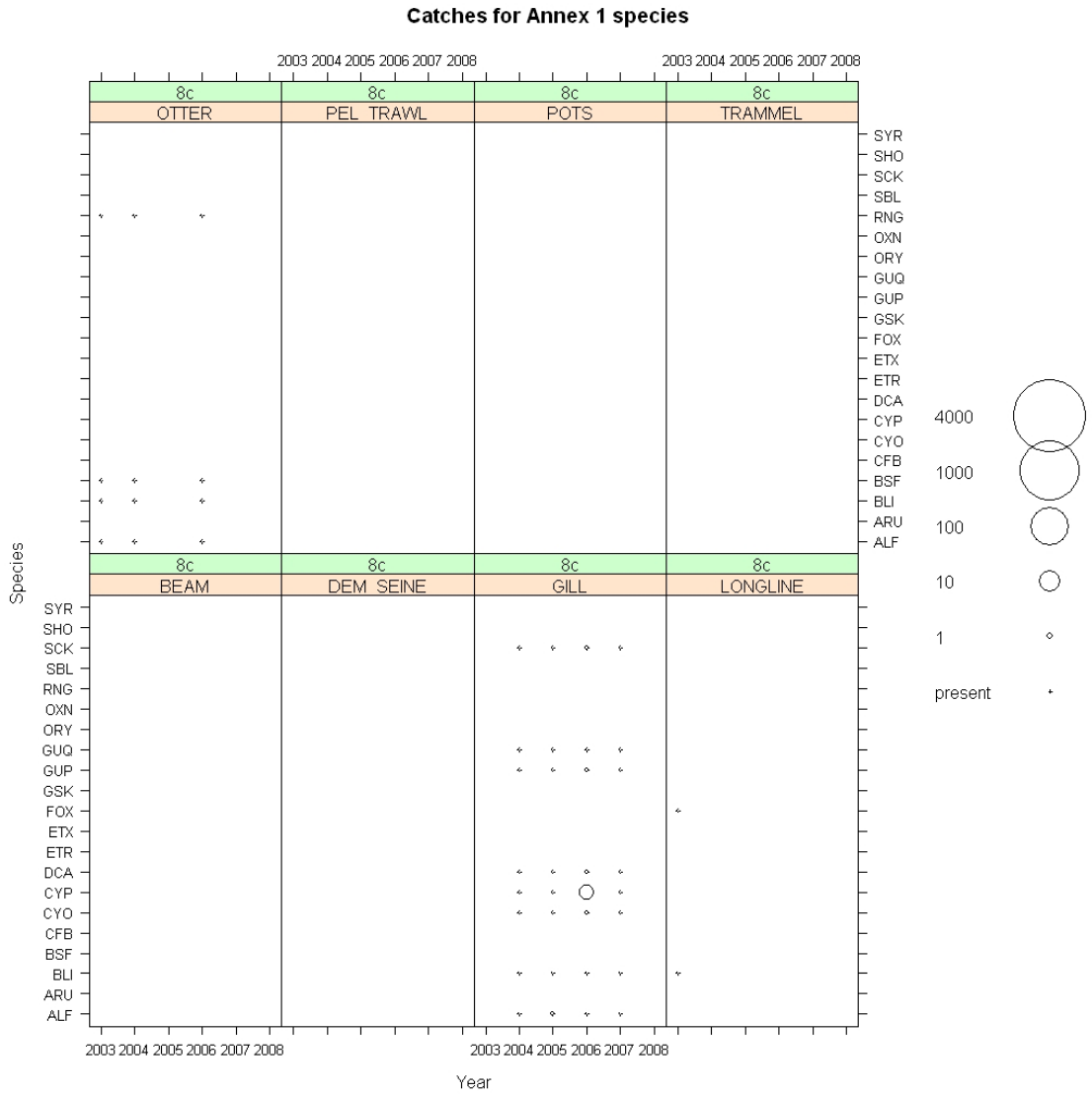

Figure 3.3.9.4 Catches for Annex 1 species.

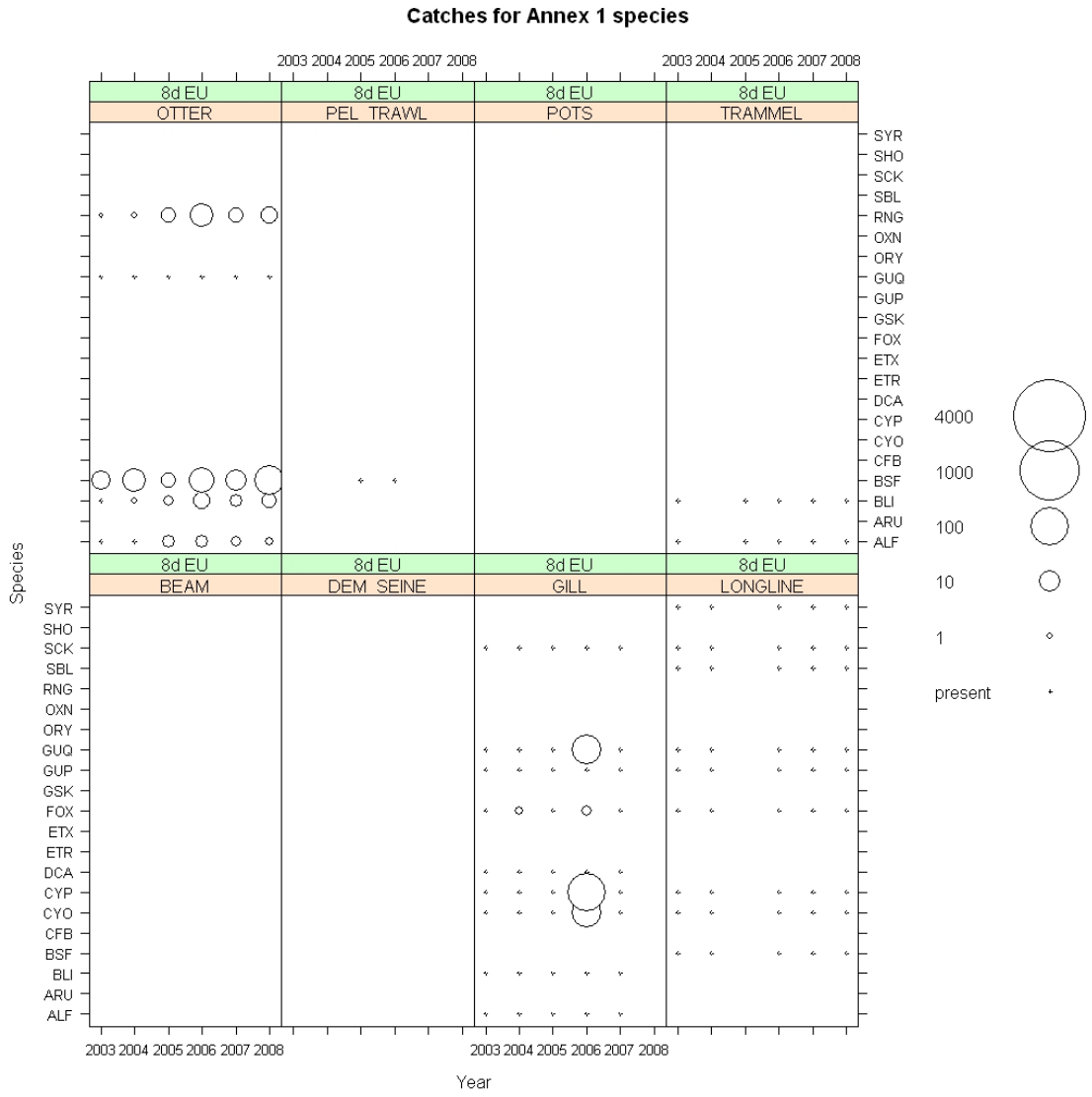

Figure 3.3.9.5 Catches for Annex 1 species.

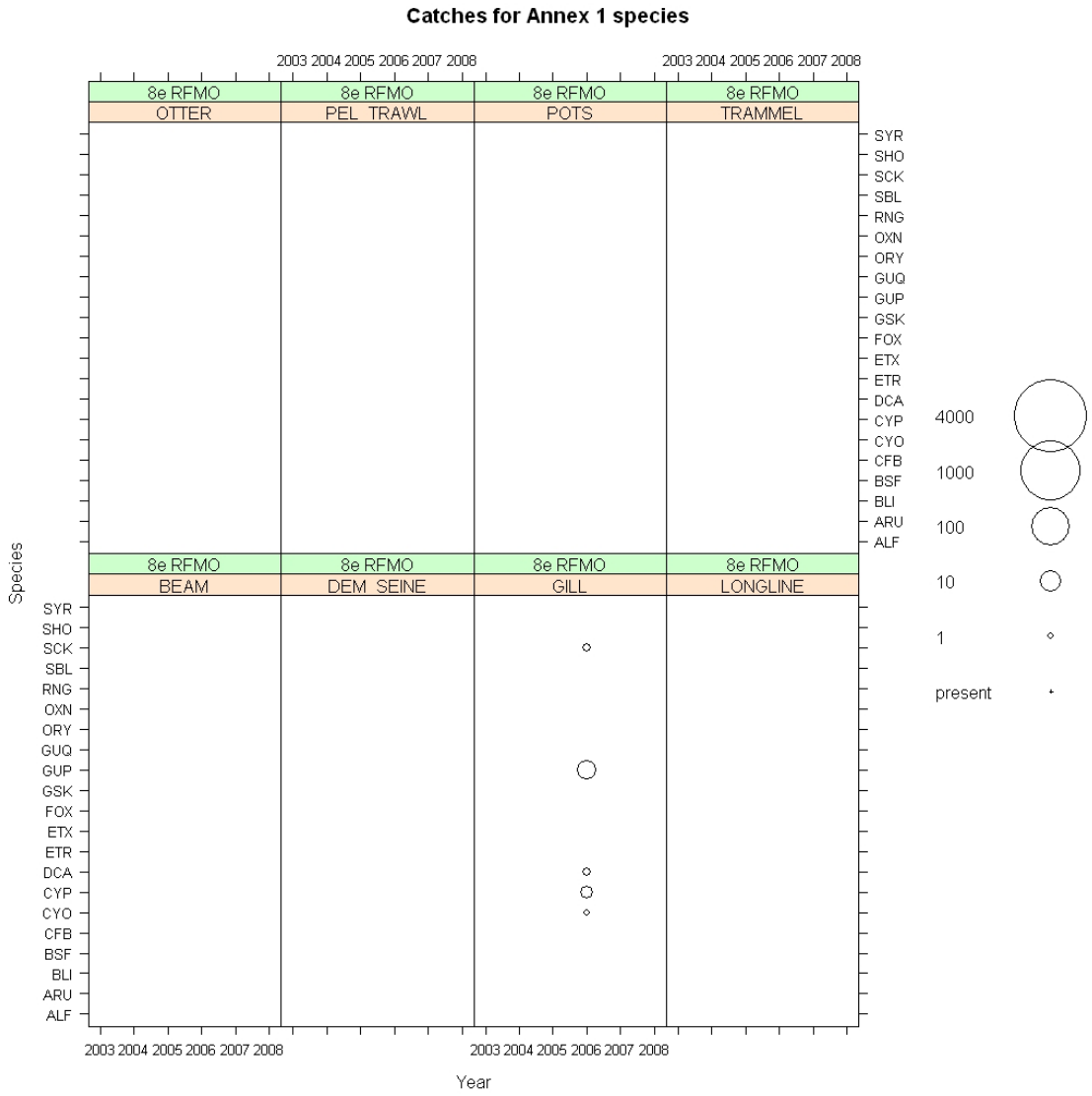

Figure 3.3.9.6 Catches for Annex 1 species.

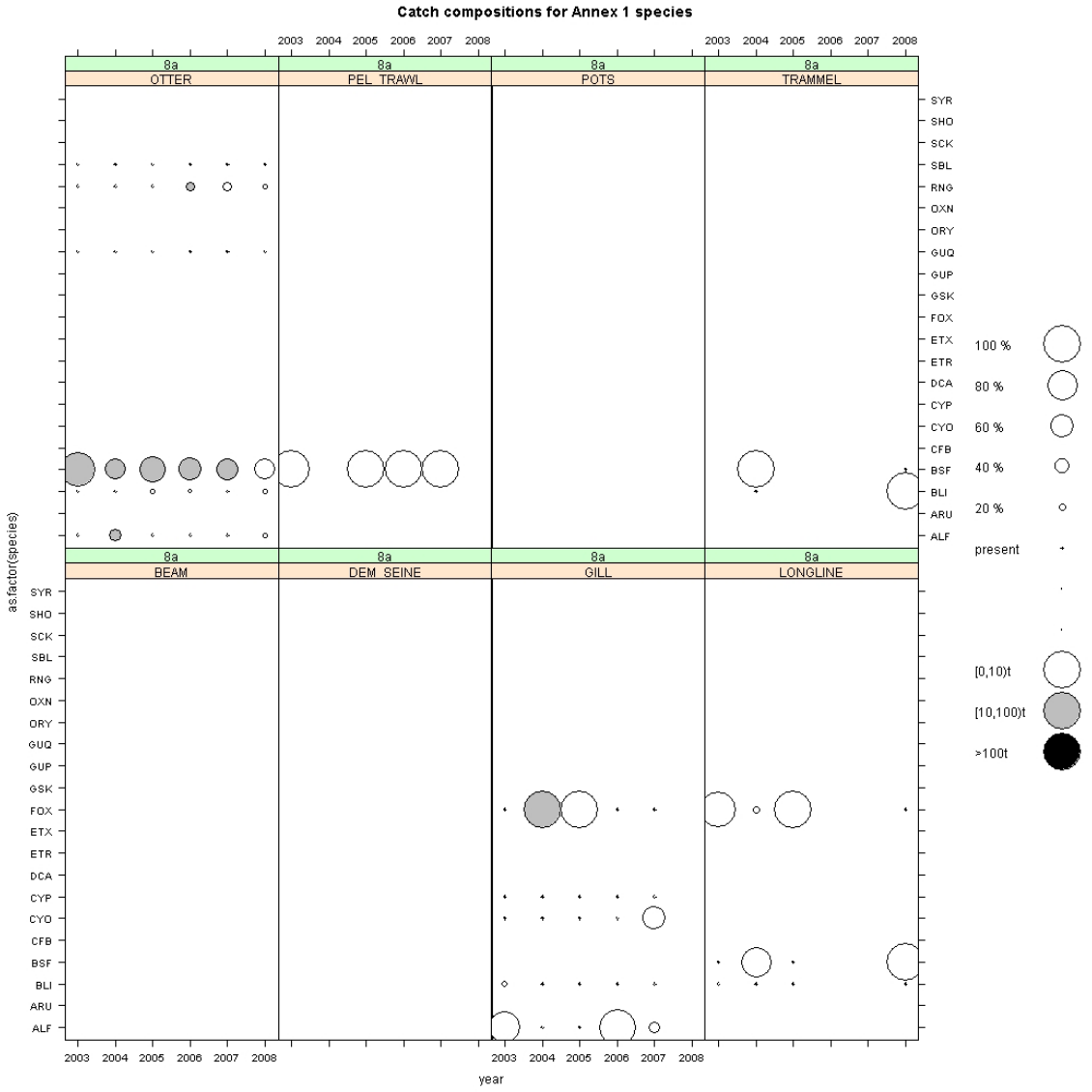

Figure 3.3.9.7 Catch compositions for Annex 1 species.

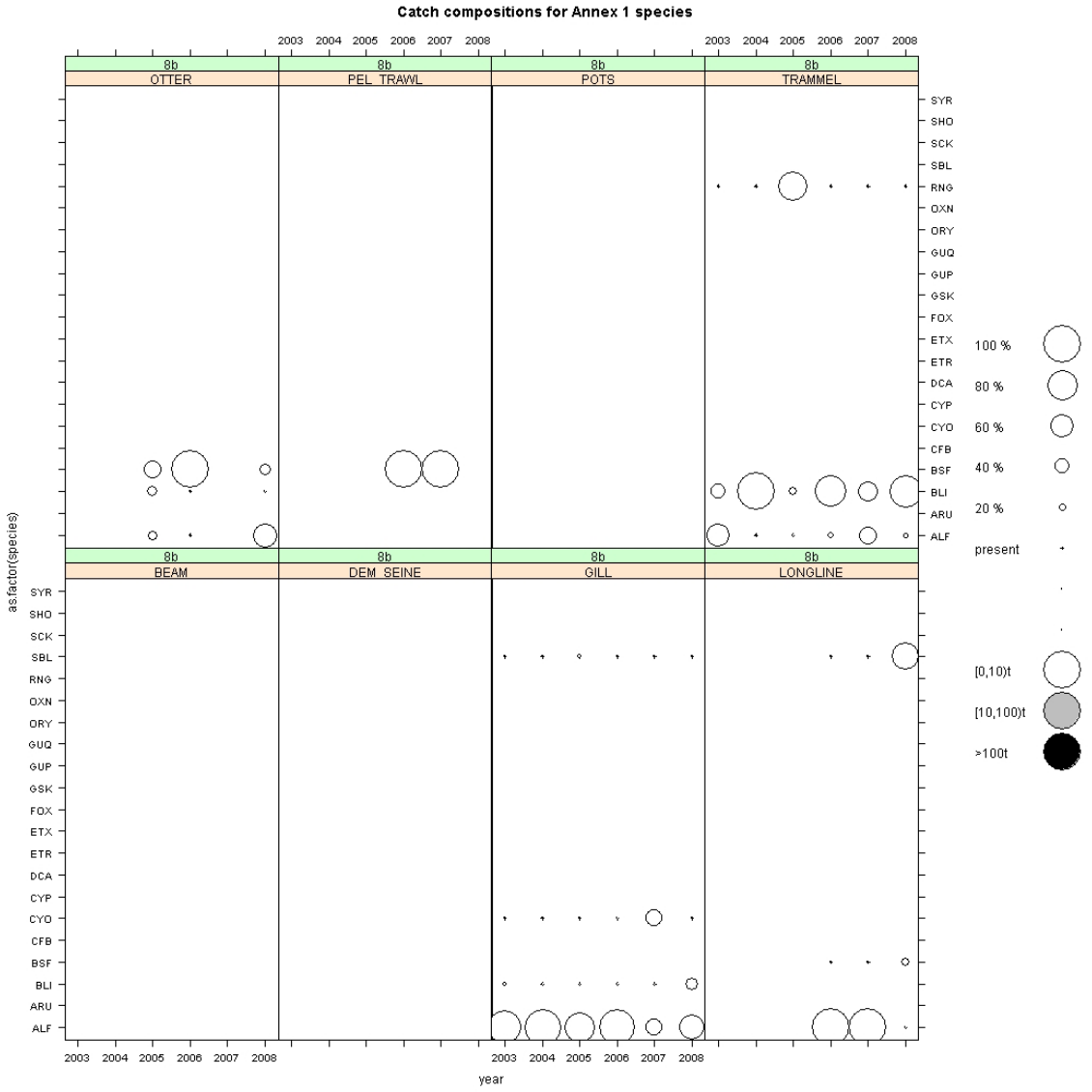

Figure 3.3.9.8 Catch compositions for Annex 1 species.

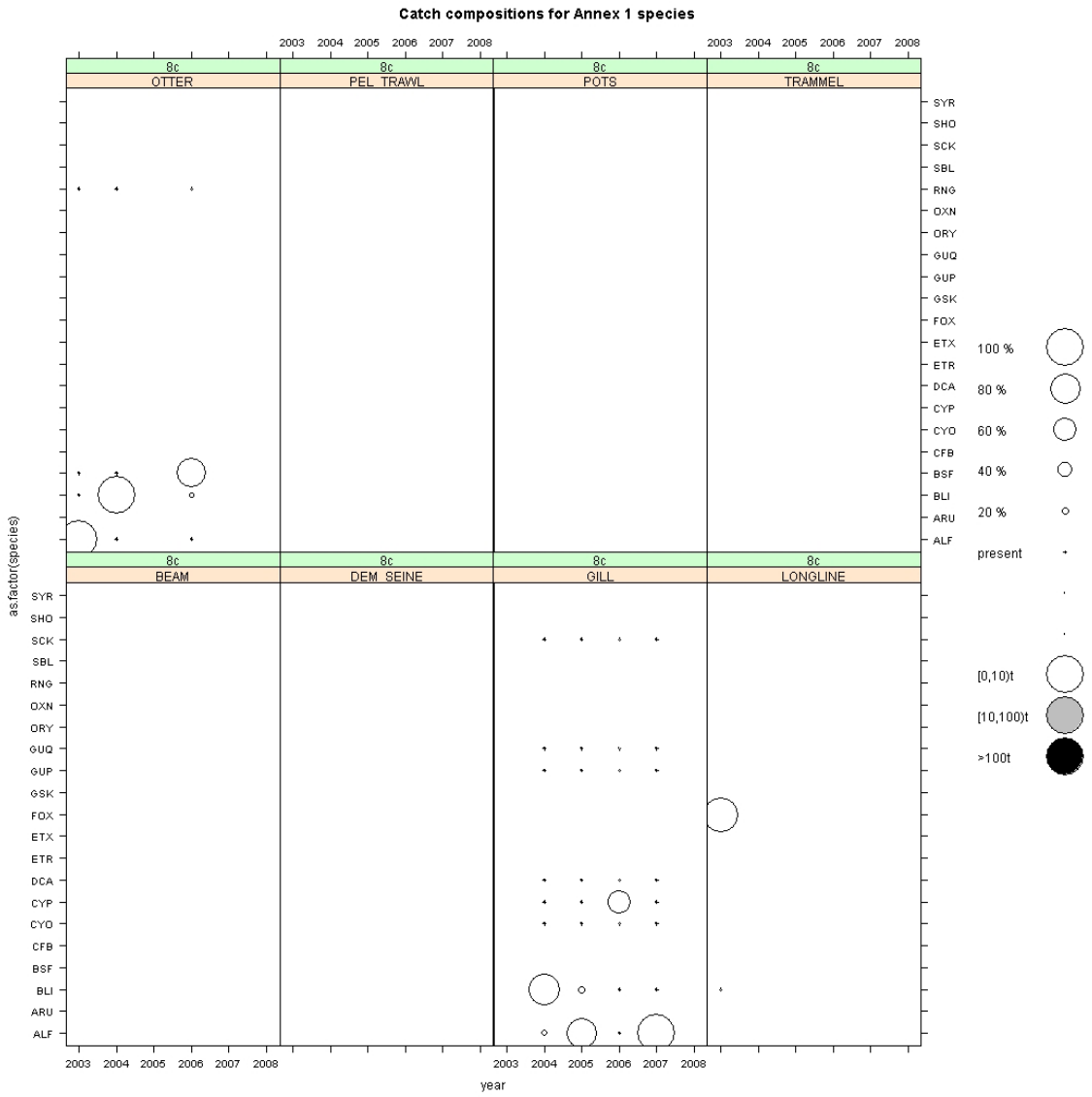

Figure 3.3.9.9 Catch compositions for Annex 1 species.

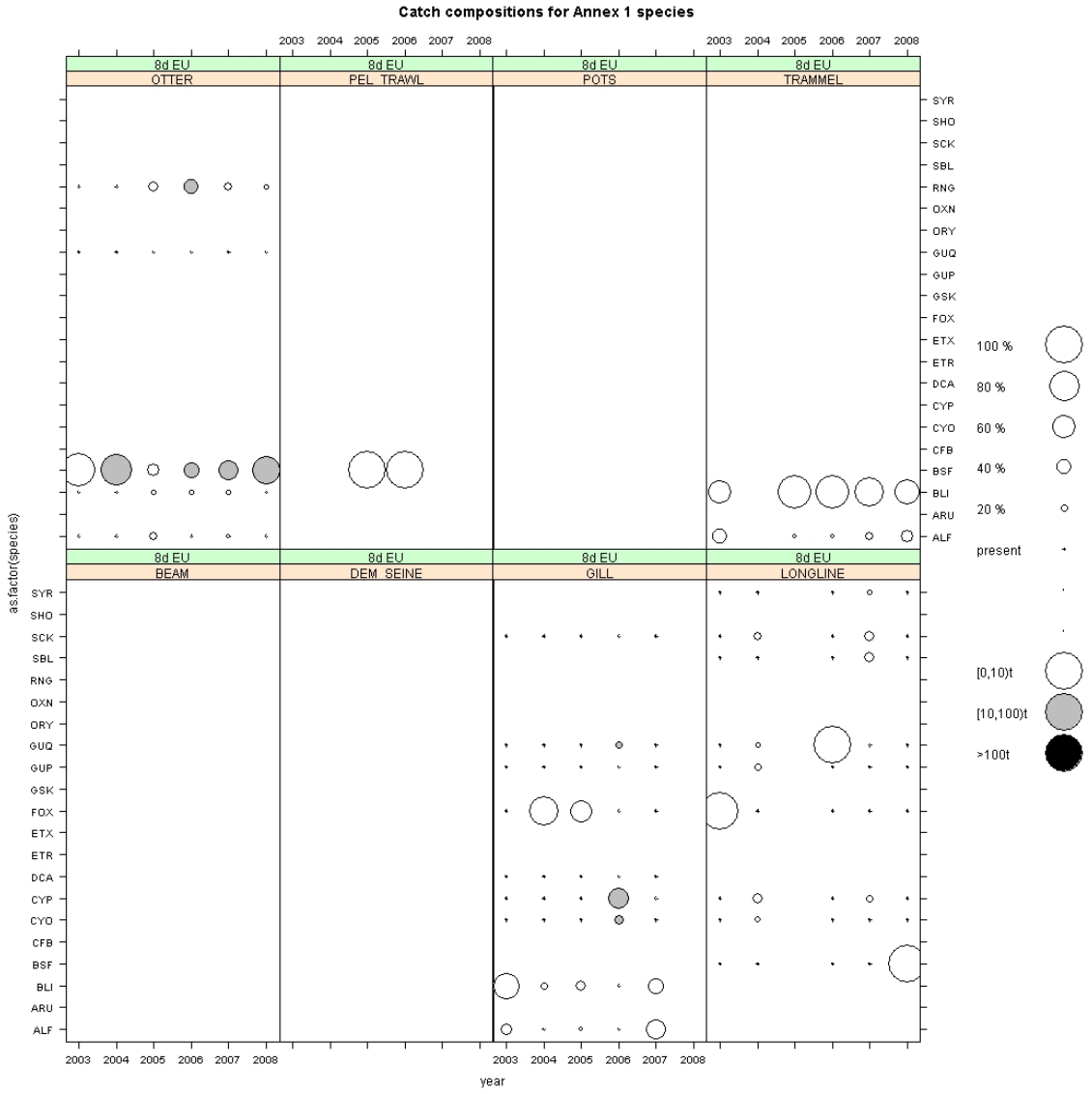

Figure 3.3.9.10 Catch compositions for Annex 1 species.

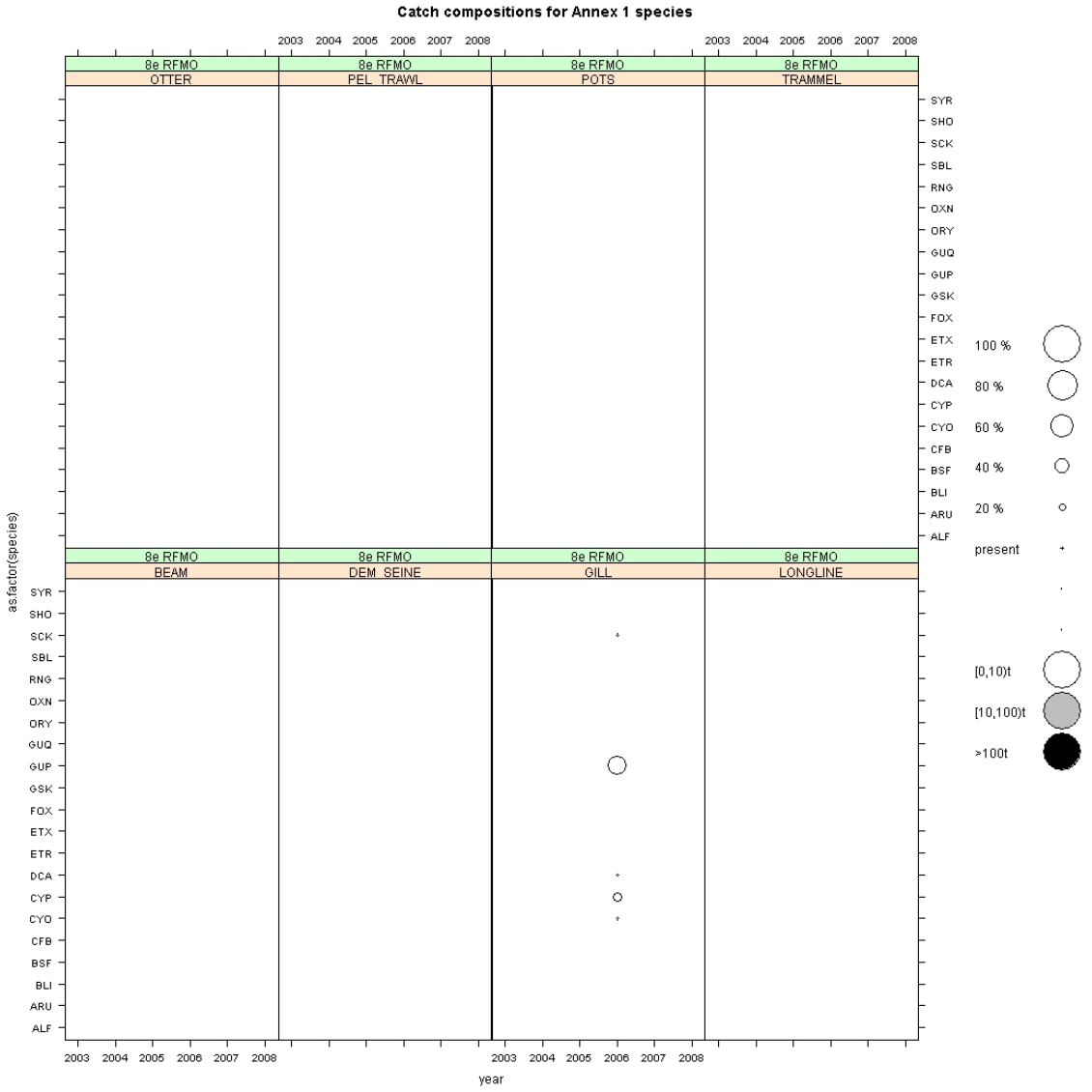

Figure 3.3.9.11 Catch compositions for Annex 1 species.

3.3.10. Deep Sea ICES Area IX

Effort

Most of the effort in this area was contributed by Portugal as shown in Table 3.3.10.1 (there was no information from Spain). Almost all of this effort took place in the EU part of Area IX (Table 3.3.10.2). Small amounts of effort were recorded by France and UK. Prior to 2003 there was no recorded effort and the highest values occur recently.

Table 3.3.10.3 and Figure 3.3.10.1 shows trends in effort by country and by main gears illustrating that Portuguese longline is the most important and that this gear is responsible for the overall trend.

Table 3.3.10.1 Deep Sea Effort (kwdays) 2000-2008 by country ICES Area IX (total)

YEAR	BEL	DEN	GER	SPN	FRA	IRL	NED	POR	UK	TOT
2000	0	0	0	0	0	0	0	0	0	0
2001	0	0	0	0	0	0	0	0	0	0
2002	0	0	0	0	0	0	0	0	0	0
2003	0	0	0	0	0	0	0	1,537	0	1,537
2004	0	0	0	0	0	0	0	0	0	0
2005	0	0	0	0	0	0	0	78,057	0	78,057
2006	0	0	0	0	0	0	0	202,085	138,797	340,882
2007	0	0	0	0	0	0	0	609,650	11,906	621,556
2008	0	0	0	0	2,576	0	0	486,929	0	489,505

Table 3.3.10.2 Deep Sea Effort (kwdays) 2000-2008 by country ICES Area IX (EU)

YEAR	BEL	DEN	GER	SPN	FRA	IRL	NED	POR	UK	TOT
2000	0	0	0	0	0	0	0	0	0	0
2001	0	0	0	0	0	0	0	0	0	0
2002	0	0	0	0	0	0	0	0	0	0
2003	0	0	0	0	0	0	0	1,116	0	1,116
2004	0	0	0	0	0	0	0	0	0	0
2005	0	0	0	0	0	0	0	48,385	0	48,385
2006	0	0	0	0	0	0	0	193,032	138,797	331,829
2007	0	0	0	0	0	0	0	589,845	11,906	601,751
2008	0	0	0	0	2,576	0	0	467,179	0	469,755

Table 3.3.10.3 Deep Sea Effort (kwdays) 2000-2008 by gear and country ICES Area IX (total)

GEAR	YEAR	BEL	DEN	GER	SPN	FRA	IRL	NED	POR	UK	TOT
LONGLINE	2000	0	0	0	0	0	0	0	0	0	0
	2001	0	0	0	0	0	0	0	0	0	0
	2002	0	0	0	0	0	0	0	0	0	0
	2003	0	0	0	0	0	0	0	1,537	0	1,537
	2004	0	0	0	0	0	0	0	0	0	0
	2005	0	0	0	0	0	0	0	78,057	0	78,057
	2006	0	0	0	0	0	0	0	202,085	4,928	207,013
	2007	0	0	0	0	0	0	0	609,650	0	609,650
	2008	0	0	0	0	0	0	0	486,929	0	486,929
GILL	2000	0	0	0	0	0	0	0	0	0	0
	2001	0	0	0	0	0	0	0	0	0	0
	2002	0	0	0	0	0	0	0	0	0	0
	2003	0	0	0	0	0	0	0	0	0	0
	2004	0	0	0	0	0	0	0	0	0	0
	2005	0	0	0	0	0	0	0	0	0	0
	2006	0	0	0	0	0	0	0	0	130,733	130,733
	2007	0	0	0	0	0	0	0	0	11,906	11,906
	2008	0	0	0	0	2,576	0	0	0	0	2,576

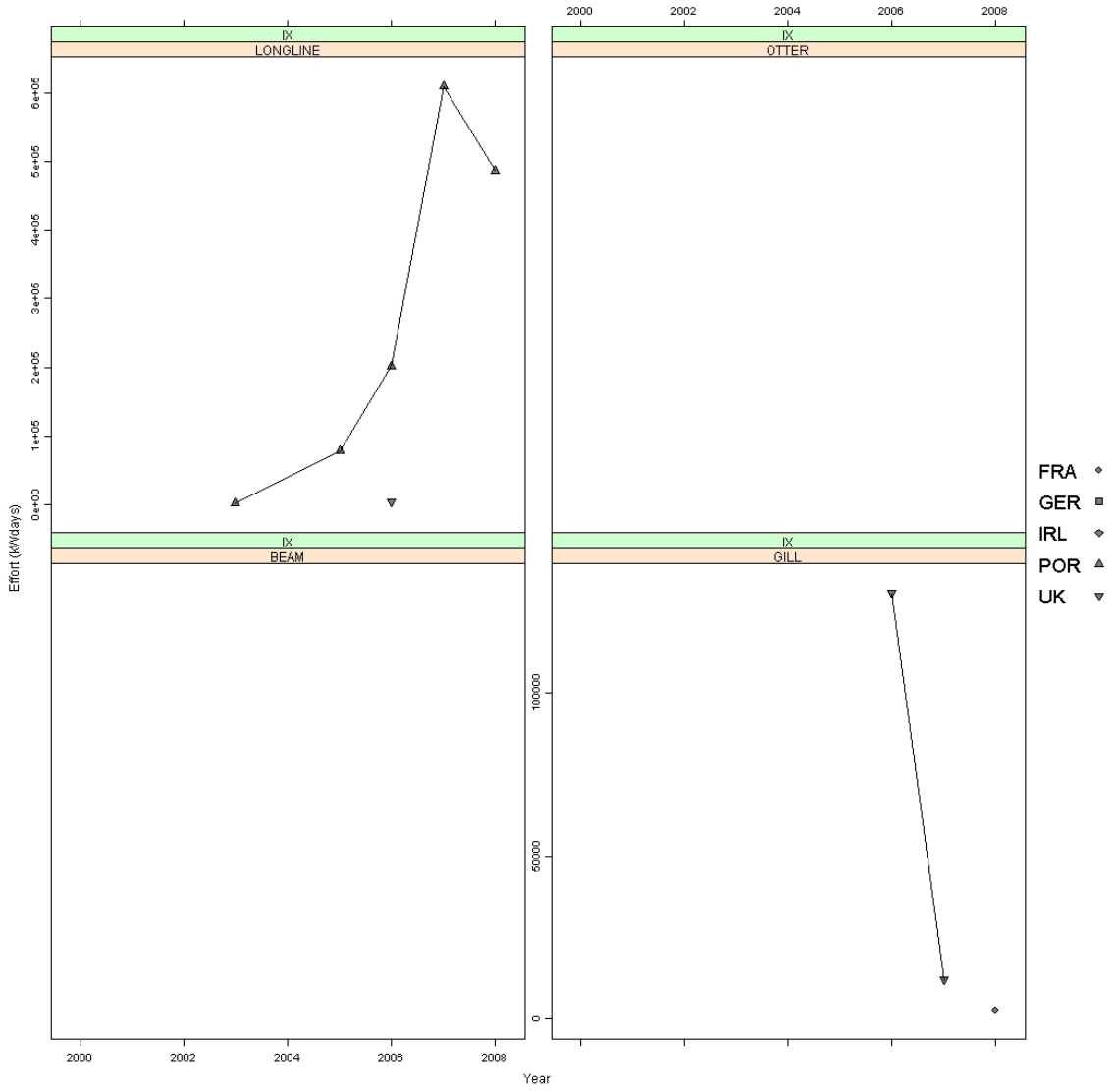

Figure 3.3.10.1 Deep Sea Effort (kwdays) 2000-2008 by gear and country ICES Area IX

Catch and catch composition

Figures 3.3.10.2 to 3.3.10.4 show catches by gear in ICES Area IX while figures 3.3.10.5 to 3.3.10.7 show catch composition. Catches by longline dominate in ICES IXa and the black scabbard fish is the most important species. Significant landings of sharks are also made by longlines and this is an area where shark landings are increasing. The catch composition in this area points to two distinct long line fisheries one landing almost exclusively black scabbard and less selective one taking a mix of shark species.

Catches from the various parts of IXb have been smaller (mainly in 2006) and include shark species taken in gillnets.

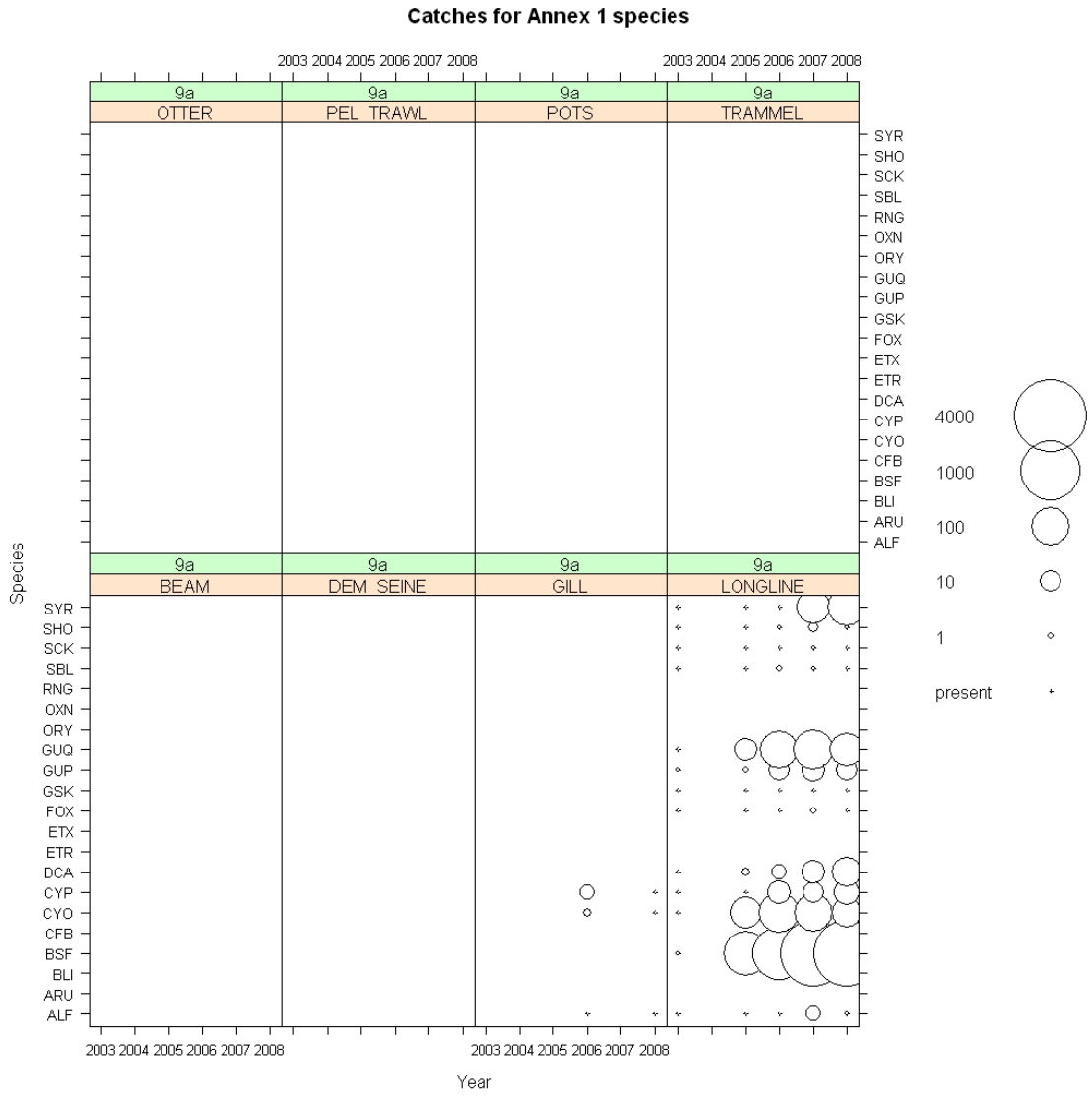

Figure 3.3.10.2 Catches for Annex 1 species.

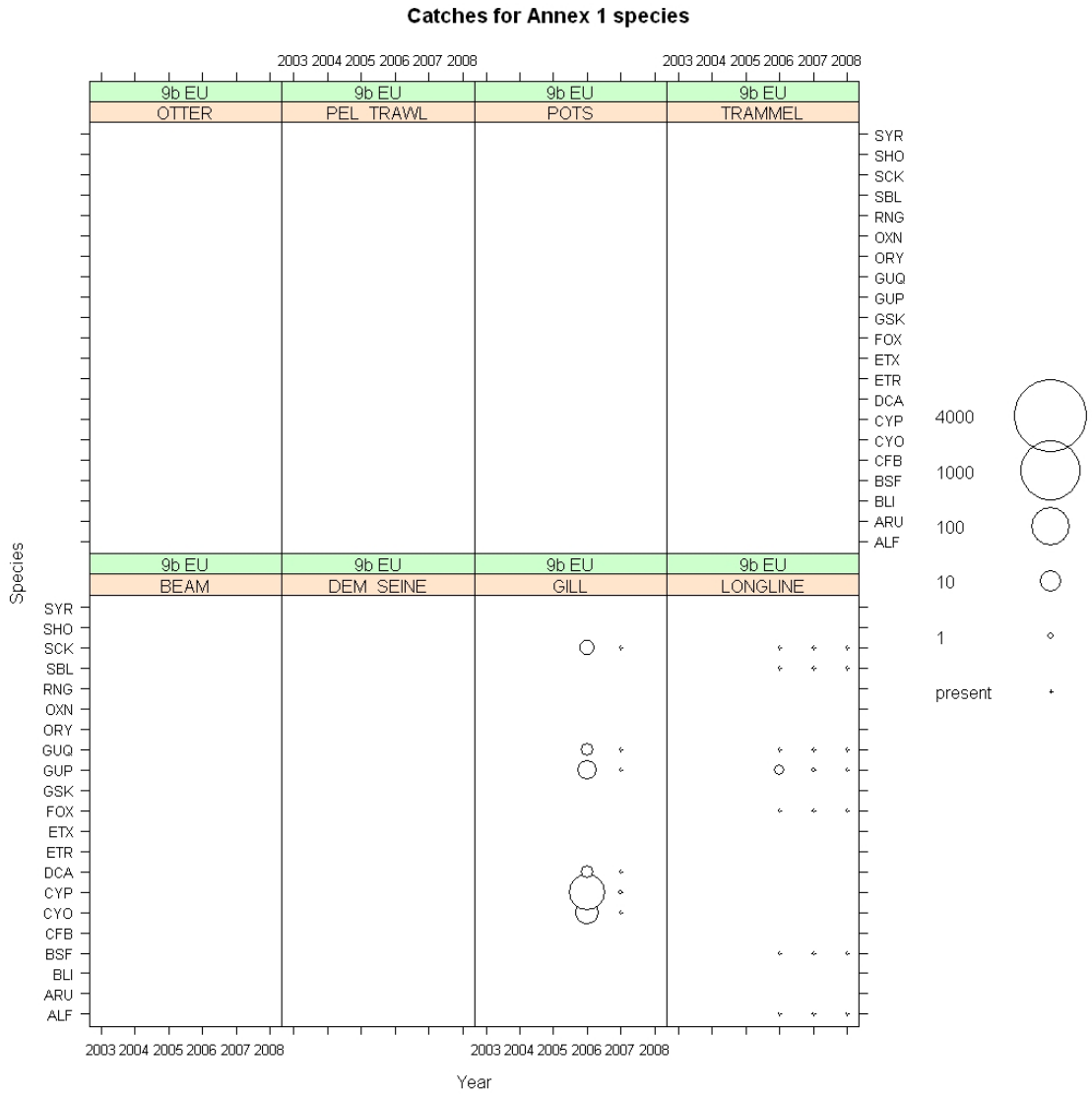

Figure 3.3.10.3 Catches for Annex 1 species.

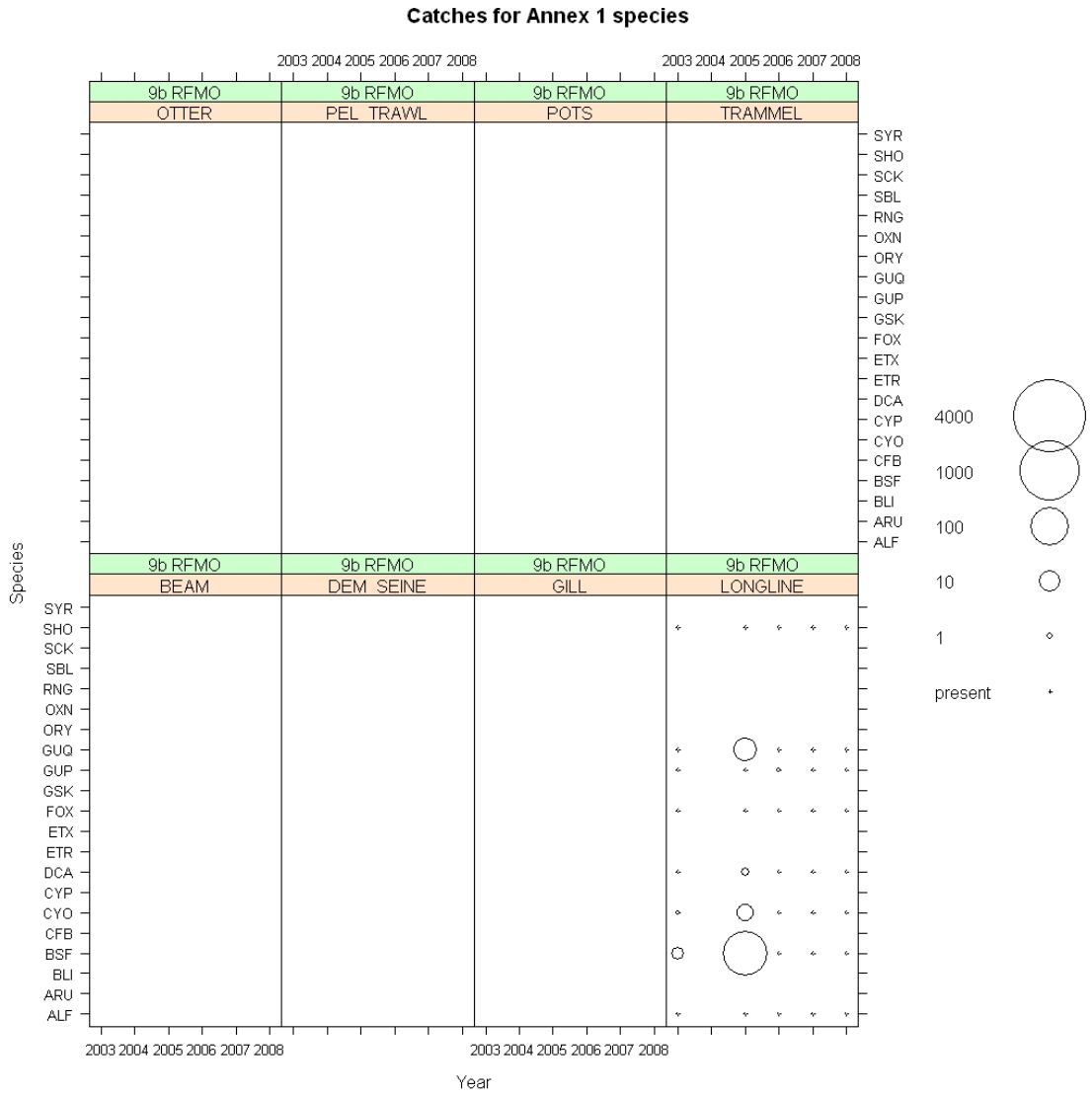

Figure 3.3.10.4 Catches for Annex 1 species.

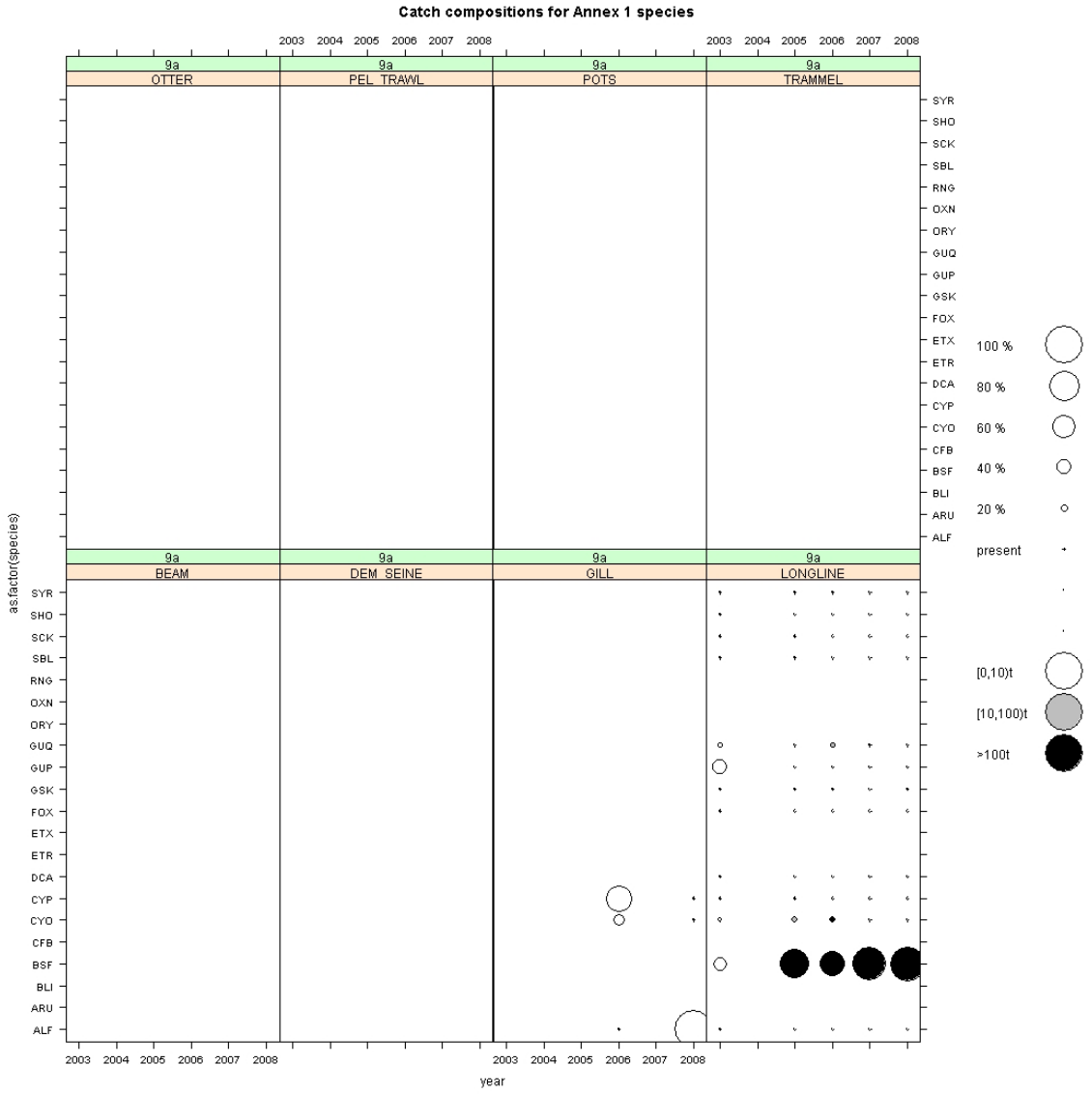

Figure 3.3.10.5 Catches for Annex 1 species.

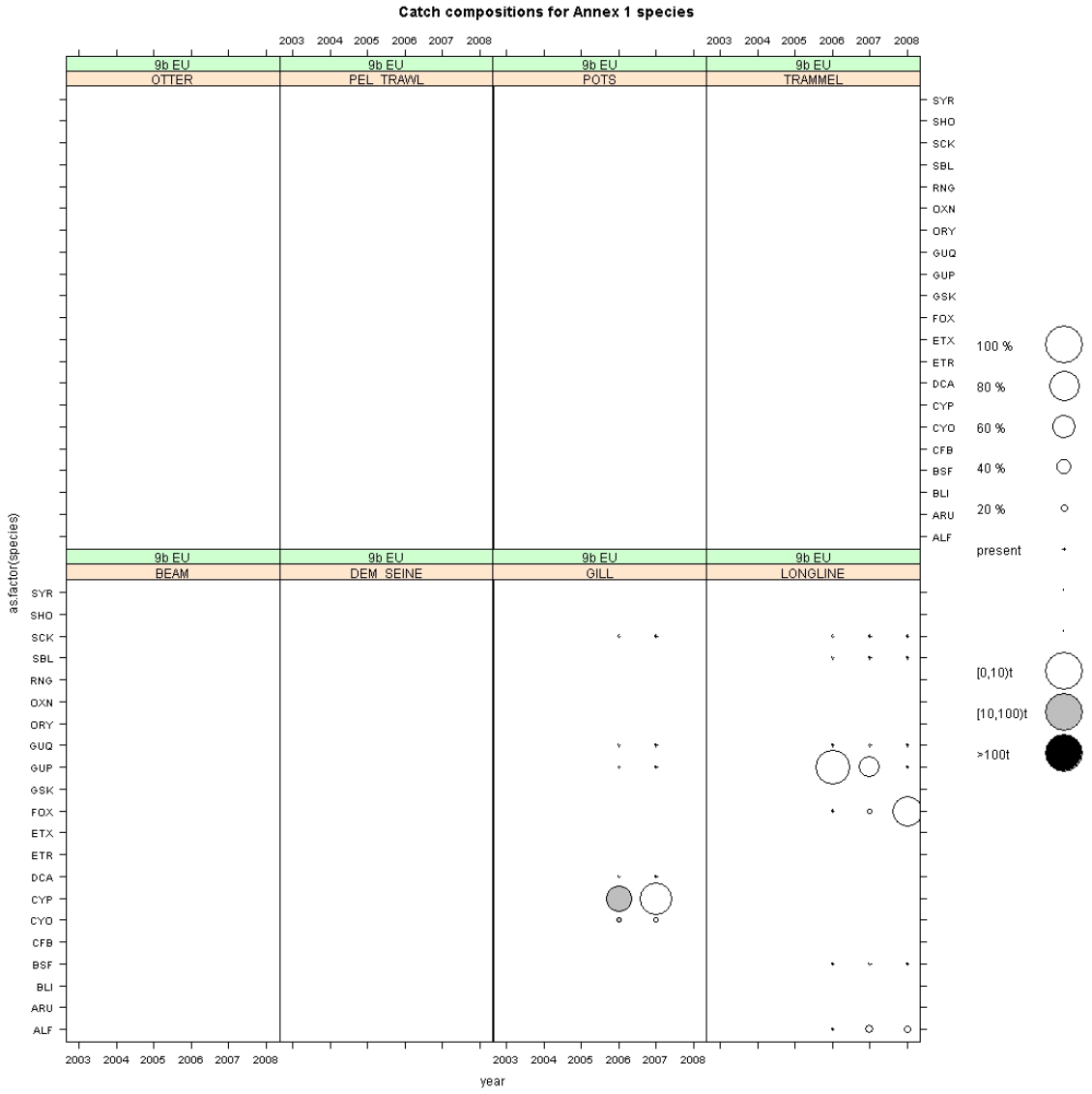

Figure 3.3.10.6 Catches for Annex 1 species.

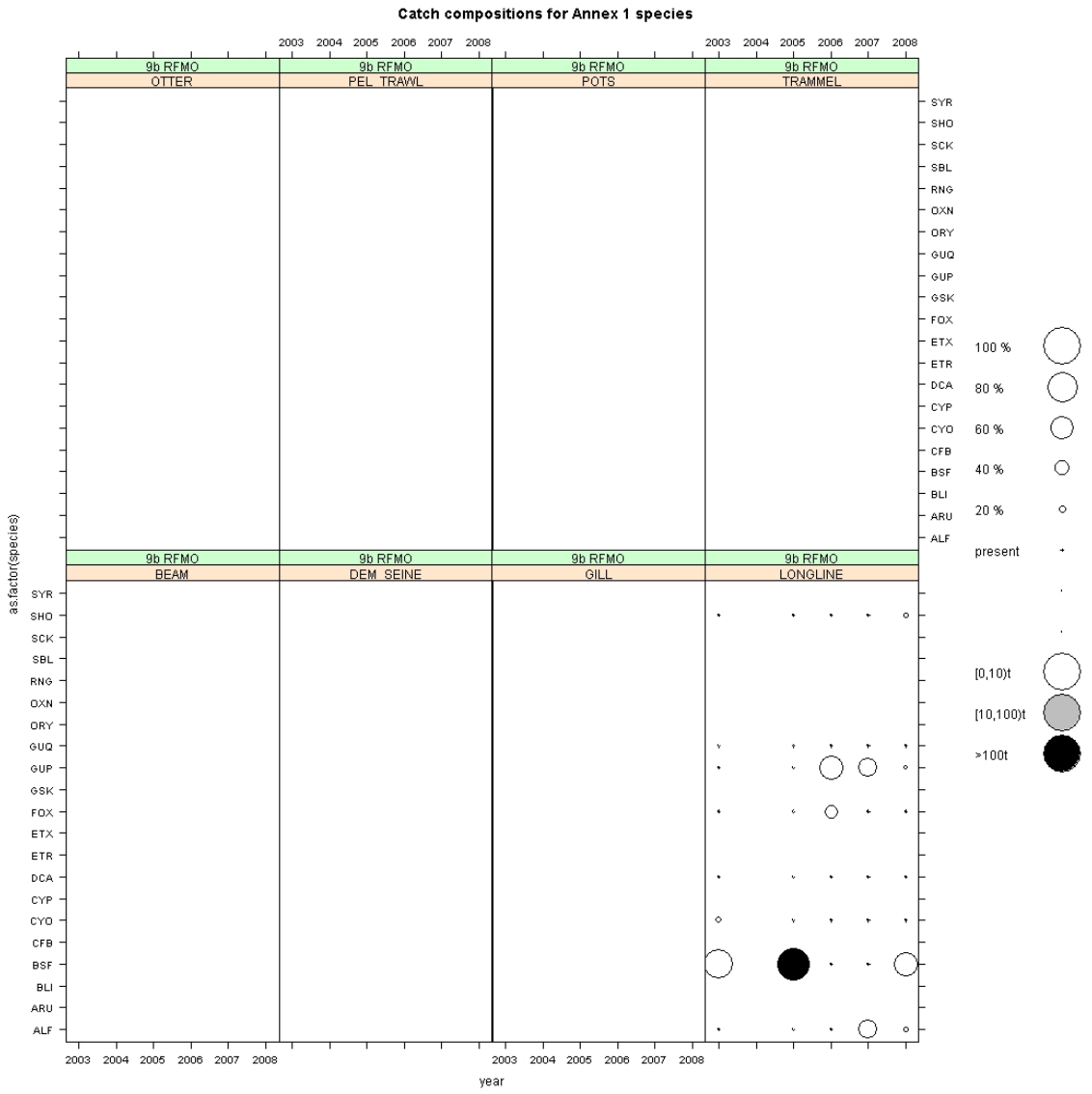

Figure 3.3.10.7 Catches for Annex 1 species.

3.3.11. Deep Sea ICES Area X

Effort

Recordings of effort in ICES X are very small and more sporadic than other areas. Most of the effort in the EU part of X are by Portuguese longline, while Ireland and the UK record effort from otter trawls operating outside the EU region (Table 3.3.11.1 to 3.3.11.3 and Figure 3.3.11.1)

Table 3.3.11.1 Deep Sea Effort (kwdays) 2000-2008 by country ICES Area X (total)

YEAR	BEL	DEN	GER	SPN	FRA	IRL	NED	POR	UK	TOT
2000	0	0	0	0	0	0	0	0	30,545	30,545
2001	0	0	0	0	0	0	0	0	0	0
2002	0	0	0	0	0	0	0	0	0	0
2003	0	0	0	0	0	0	0	0	0	0
2004	0	0	0	0	0	31,378	0	0	0	31,378
2005	0	0	0	0	0	8,656	0	0	0	8,656
2006	0	0	0	0	0	0	0	0	0	0
2007	0	0	0	0	0	0	0	41,738	0	41,738
2008	0	0	0	0	0	0	0	12,312	0	12,312

Table 3.3.11.2 Deep Sea Effort (kwdays) 2000-2008 by country ICES Area X (EU)

YEAR	BEL	DEN	GER	SPN	FRA	IRL	NED	POR	UK	TOT
2000	0	0	0	0	0	0	0	0	12,218	12,218
2001	0	0	0	0	0	0	0	0	0	0
2002	0	0	0	0	0	0	0	0	0	0
2003	0	0	0	0	0	0	0	0	0	0
2004	0	0	0	0	0	0	0	0	0	0
2005	0	0	0	0	0	0	0	0	0	0
2006	0	0	0	0	0	0	0	0	0	0
2007	0	0	0	0	0	0	0	41,738	0	41,738
2008	0	0	0	0	0	0	0	12,312	0	12,312

Table 3.3.11.3 Deep Sea Effort (kwdays) 2000-2008 by gear and country ICES Area X (total)

GEAR	YEAR	BEL	DEN	GER	SPN	FRA	IRL	NED	POR	UK	TOT
OTTER	2000	0	0	0	0	0	0	0	0	30,545	30,545
	2001	0	0	0	0	0	0	0	0	0	0
	2002	0	0	0	0	0	0	0	0	0	0
	2003	0	0	0	0	0	0	0	0	0	0
	2004	0	0	0	0	0	31,378	0	0	0	31,378
	2005	0	0	0	0	0	8,656	0	0	0	8,656
	2006	0	0	0	0	0	0	0	0	0	0
	2007	0	0	0	0	0	0	0	0	0	0
	2008	0	0	0	0	0	0	0	0	0	0
LONGLINE	2000	0	0	0	0	0	0	0	0	0	0
	2001	0	0	0	0	0	0	0	0	0	0
	2002	0	0	0	0	0	0	0	0	0	0
	2003	0	0	0	0	0	0	0	0	0	0
	2004	0	0	0	0	0	0	0	0	0	0
	2005	0	0	0	0	0	0	0	0	0	0
	2006	0	0	0	0	0	0	0	0	0	0
	2007	0	0	0	0	0	0	0	41,738	0	41,738
	2008	0	0	0	0	0	0	0	12,312	0	12,312

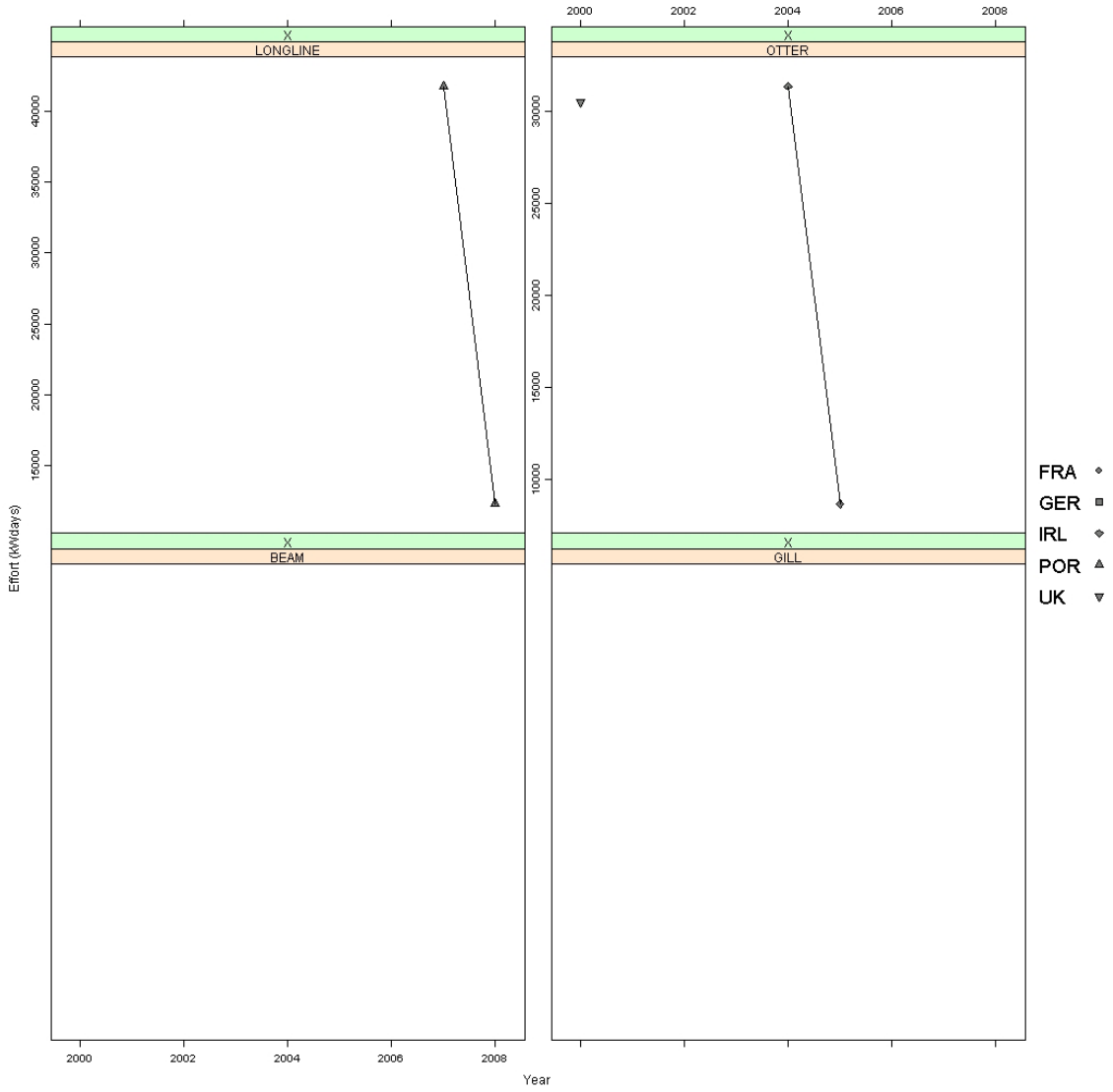

Figure 3.3.11.1 Deep Sea Effort (kwdays) 2000-2008 by gear and country ICES Area X

Catch and catch composition

Figures 3.3.11.2 and 3.3.11.3 show catches and figures 3.3.11.4 and 3.3.11.5 show catch composition. There is little of note in the catches from this region, longline catches are mainly of black scabbardfish while the otter trawl catches were mainly confined to orange roughy in the early 2000s probably taken from the seamounts on the mid-Atlantic ridge.

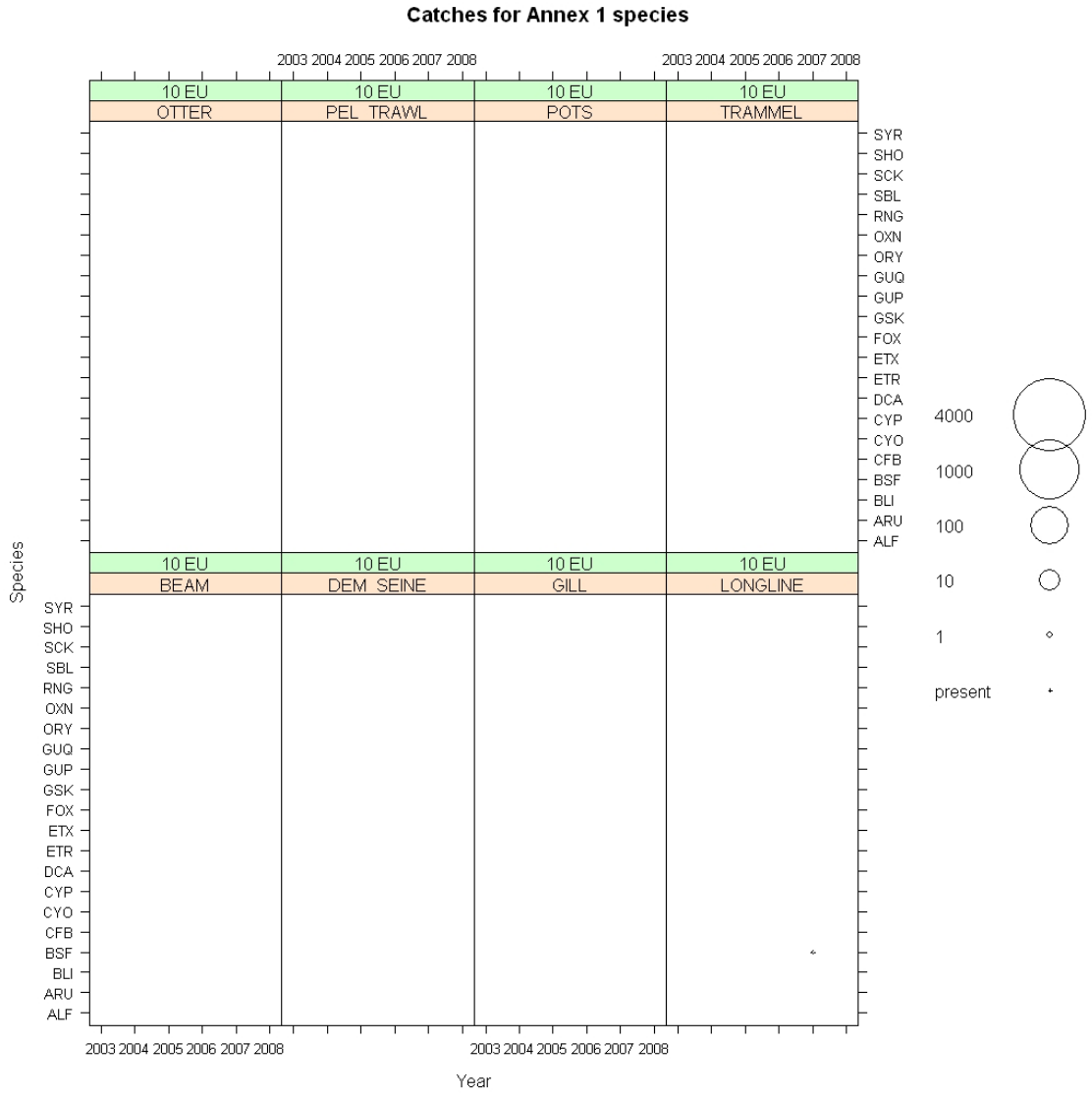

Figure 3.3.11.2 Catches for Annex 1 species.

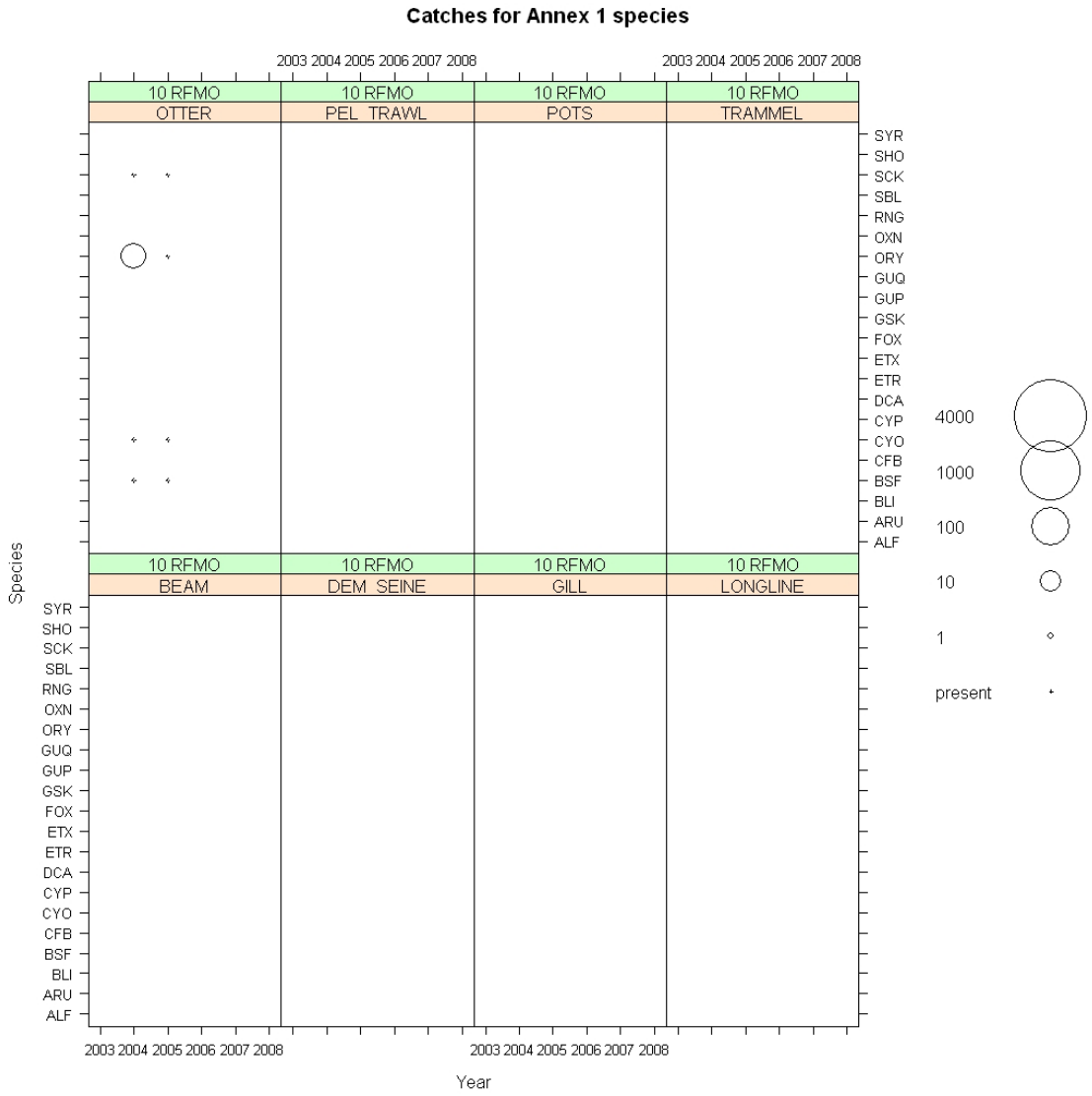

Figure 3.3.11.3 Catches for Annex 1 species.

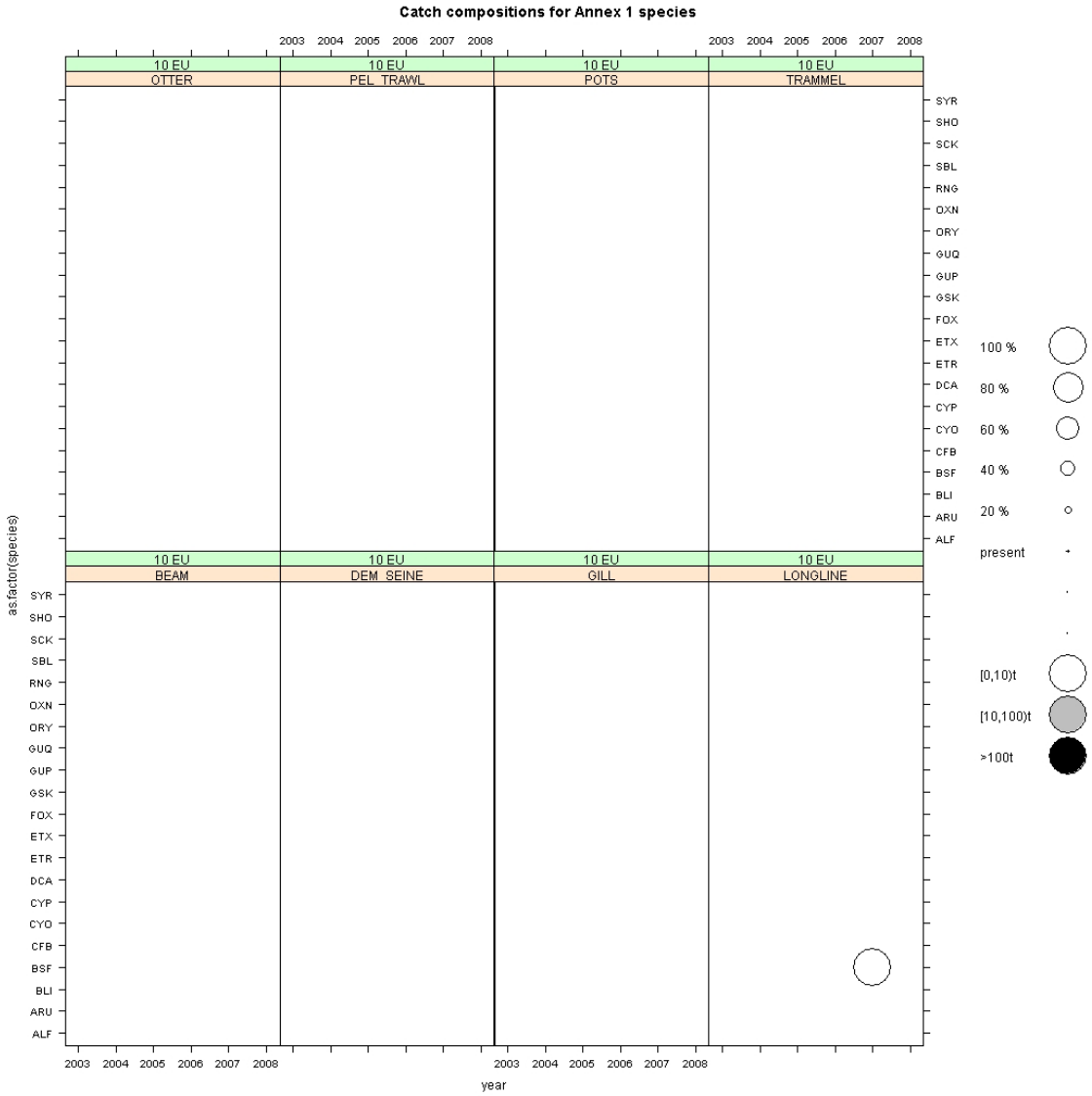

Figure 3.3.11.4 Catches for Annex 1 species.

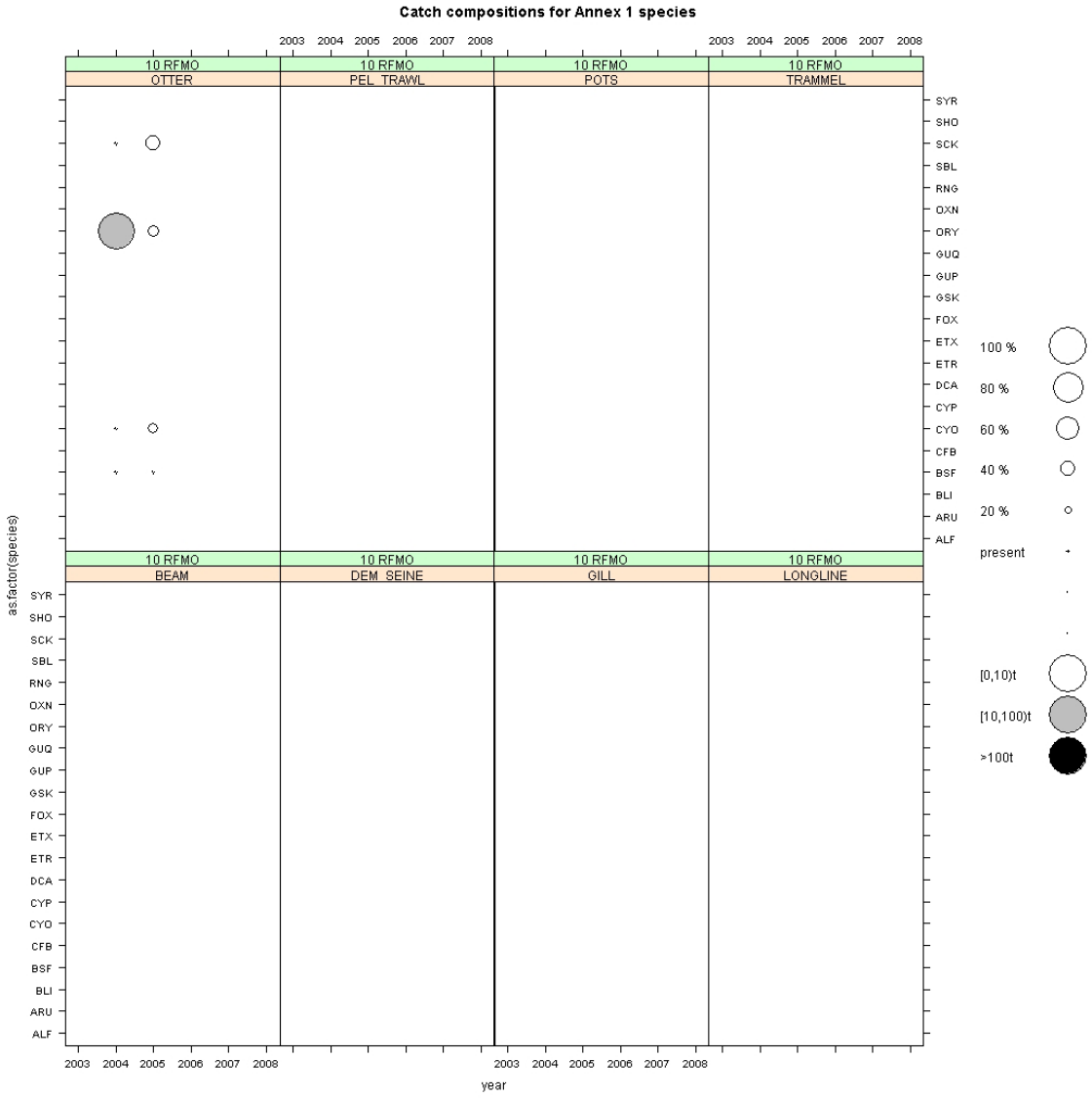

Figure 3.3.11.5 Catches for Annex 1 species.

3.3.12. Deep Sea ICES Area XII

Effort

Overall effort from ICES XII is shown in Table 3.3.12.1. The UK recorded most effort throughout the series (mainly using otter trawl and gill net – Table 3.3.12.2 and Figure 3.3.12.1) although this has dropped markedly from 2006 onwards. Other countries contributing effort included Germany, Netherlands and Ireland. Effort was not provided by Spain.

Table 3.3.12.1 Deep Sea Effort (kwdays) 2000-2008 by country ICES Area XII (total)

YEAR	BEL	DEN	GER	SPN	FRA	IRL	NED	POR	UK	TOT
2000	0	0	0	0	0	0	0	0	60,837	60,837
2001	0	0	0	0	0	0	0	0	115,481	115,481
2002	0	0	0	0	0	0	0	0	116,025	116,025
2003	0	0	21,000	0	0	29,509	0	0	102,568	153,077
2004	0	0	22,932	0	0	0	14,420	0	49,670	87,022
2005	0	0	9,708	0	0	0	22,944	0	113,809	146,461
2006	0	0	0	0	0	0	0	0	2,356	2,356
2007	0	0	0	0	0	0	0	0	4,480	4,480
2008	0	0	0	0	0	0	0	0	9,359	9,359

Table 3.3.12.2 Deep Sea Effort (kwdays) 2000-2008 by gear and country ICES Area XII (total)

GEAR	YEAR	BEL	DEN	GER	SPN	FRA	IRL	NED	POR	UK	TOT
OTTER	2000	0	0	0	0	0	0	0	0	54,686	54,686
	2001	0	0	0	0	0	0	0	0	79,013	79,013
	2002	0	0	0	0	0	0	0	0	49,648	49,648
	2003	0	0	0	0	0	28,159	0	0	12,768	40,927
	2004	0	0	0	0	0	0	0	0	3,310	3,310
	2005	0	0	0	0	0	0	0	0	9,255	9,255
	2006	0	0	0	0	0	0	0	0	0	0
	2007	0	0	0	0	0	0	0	0	0	0
	2008	0	0	0	0	0	0	0	0	0	0
LONGLINE	2000	0	0	0	0	0	0	0	0	0	0
	2001	0	0	0	0	0	0	0	0	8,395	8,395
	2002	0	0	0	0	0	0	0	0	1,957	1,957
	2003	0	0	0	0	0	1,350	0	0	0	1,350
	2004	0	0	0	0	0	0	0	0	0	0
	2005	0	0	0	0	0	0	0	0	0	0
	2006	0	0	0	0	0	0	0	0	0	0
	2007	0	0	0	0	0	0	0	0	0	0
	2008	0	0	0	0	0	0	0	0	0	0
GILL	2000	0	0	0	0	0	0	0	0	6,151	6,151
	2001	0	0	0	0	0	0	0	0	28,073	28,073
	2002	0	0	0	0	0	0	0	0	64,420	64,420
	2003	0	0	0	0	0	0	0	0	87,514	87,514
	2004	0	0	0	0	0	0	0	0	46,360	46,360
	2005	0	0	0	0	0	0	0	0	104,554	104,554
	2006	0	0	0	0	0	0	0	0	2,356	2,356
	2007	0	0	0	0	0	0	0	0	0	0
	2008	0	0	0	0	0	0	0	0	0	0

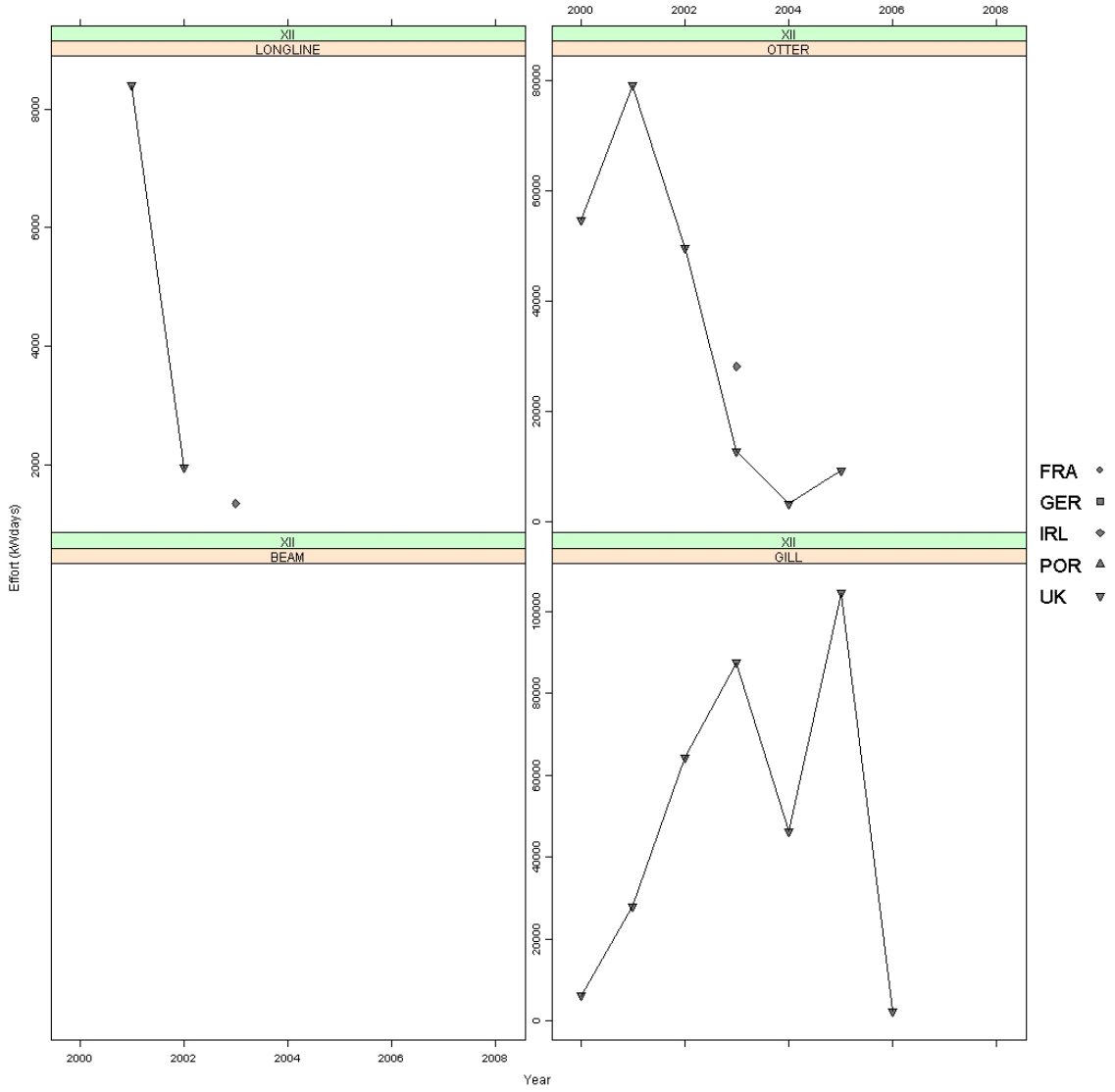

Figure 3.3.12.1 Deep Sea Effort (kwdays) 2000-2008 by gear and country ICES Area XII

Catch and catch composition

Figure 3.3.12.2 shows that trawl catches were mainly of orange roughy and blue ling while gill net catches were of shark species until the ban in 2005. Figure 3.3.12.3 confirms that the trawl catches were dominated by quite significant catches of orange roughy in 2003 but that these have fallen away.

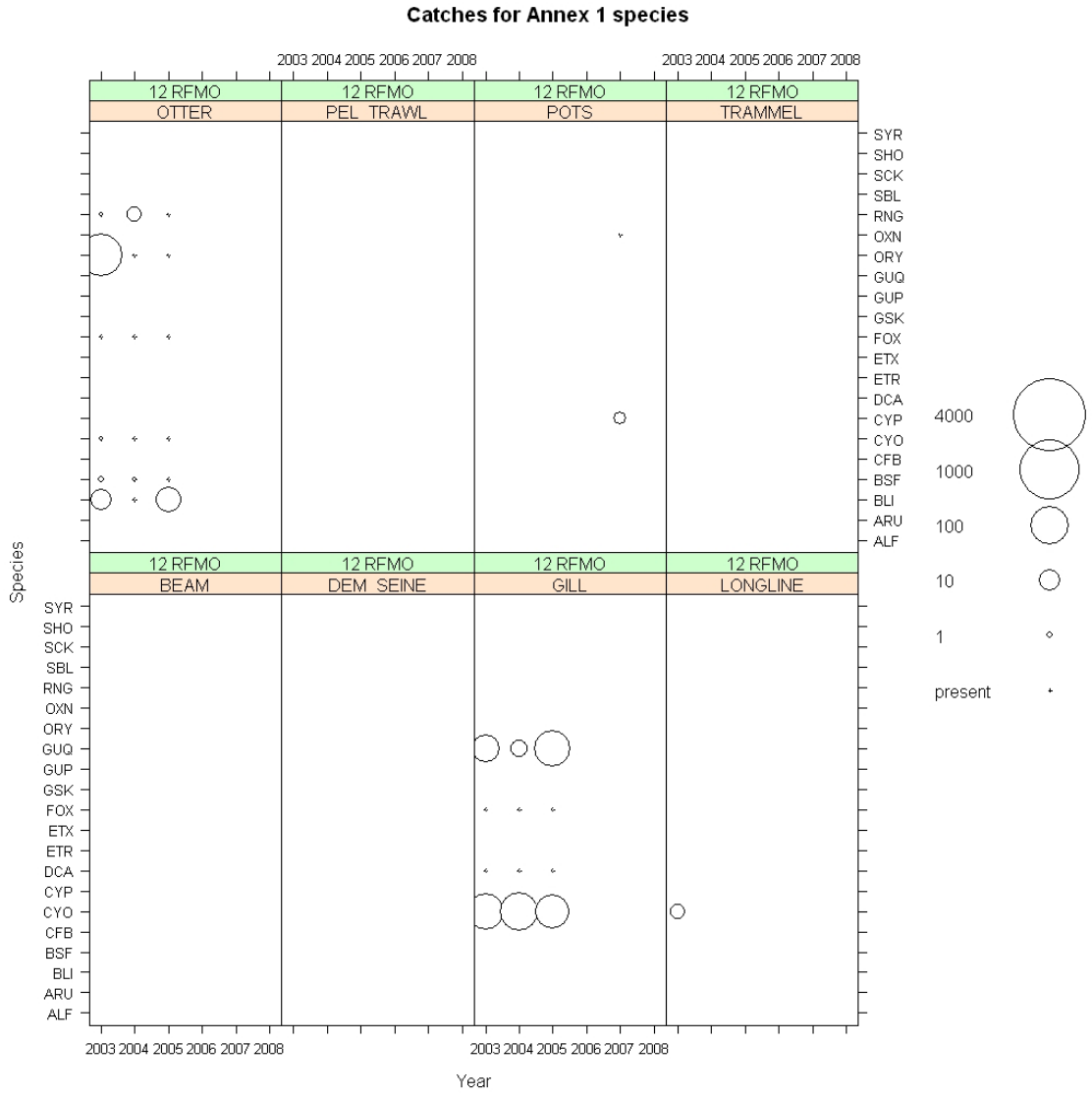

Figure 3.3.12.2 Catches for Annex 1 species.

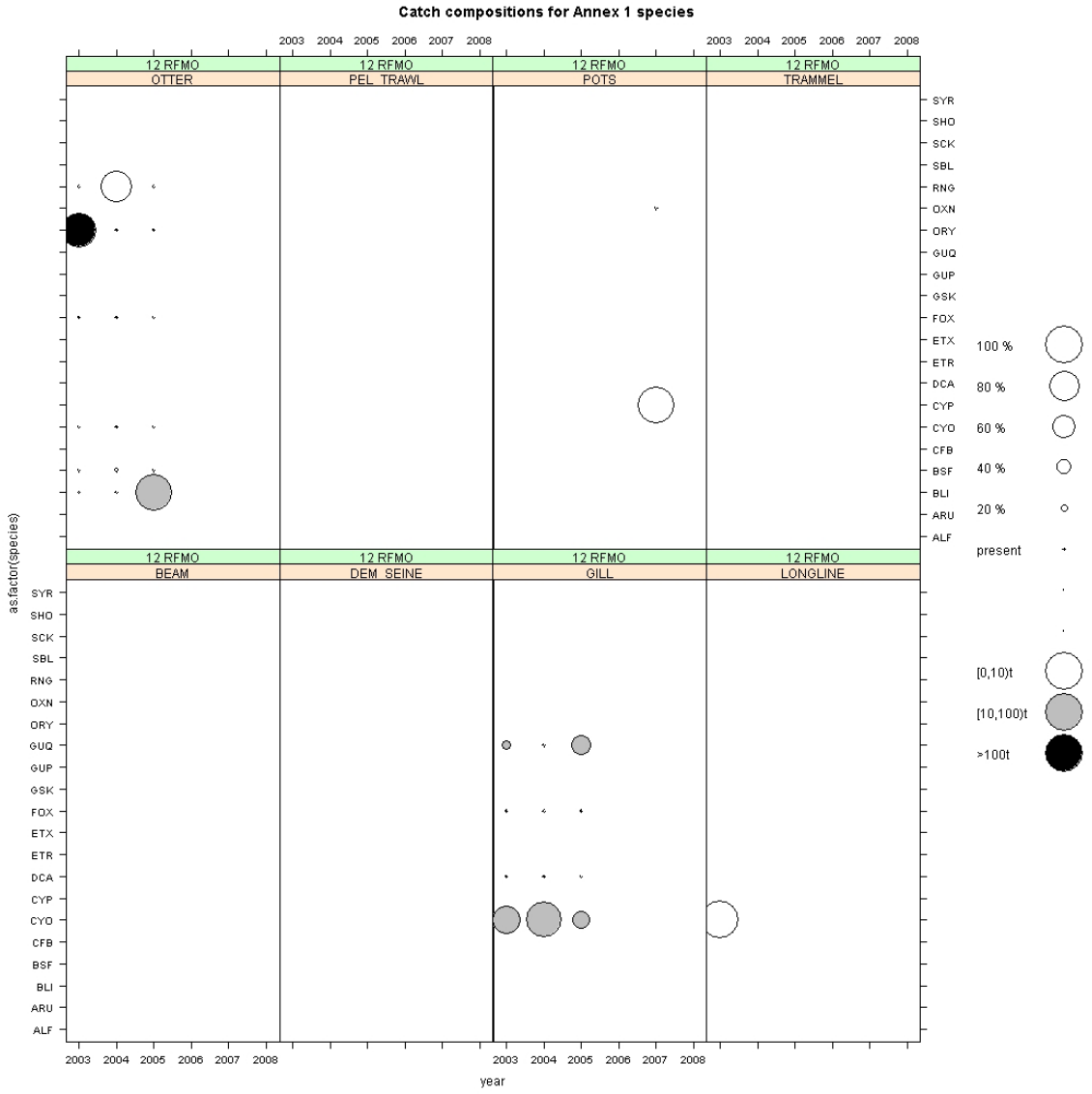

Figure 3.3.12.3 Catches for Annex 1 species.

3.3.13. Deep Sea ICES Area XIV

Effort

Effort in ICES Area XIV (shown in Tables 3.3.13.1 and 3.3.13.2 and Figure 3.3.13.1) is mainly expended outside EU waters by Germany and the UK using otter trawls. UK effort peaked in the mid 2000s but has since declined while German effort rose in the mid 2000s and remains at a relatively high level. Overall effort in 2008 remains amongst the highest in the series.

Table 3.3.13.1 Deep Sea Effort (kwdays) 2000-2008 by country ICES Area XIV (total)

YEAR	BEL	DEN	GER	SPN	FRA	IRL	NED	POR	UK	TOT
2000	0	0	0	0	0	0	0	0	289,234	289,234
2001	0	0	0	0	0	0	0	0	128,310	128,310
2002	0	0	0	0	0	0	0	0	179,731	179,731
2003	0	0	1,067,316	0	0	0	0	0	801,239	1,868,555
2004	0	0	1,975,374	0	0	0	0	0	609,192	2,584,566
2005	0	0	1,349,730	0	0	0	0	0	261,337	1,611,067
2006	0	0	1,248,640	0	0	0	0	0	0	1,248,640
2007	0	0	1,427,857	0	0	0	0	0	143,075	1,570,932
2008	0	0	1,719,689	0	0	0	0	0	96,501	1,816,190

Note: Effort by Germany and UK was all otter trawl

Table 3.3.13.2 Deep Sea Effort (kwdays) 2000-2008 by country ICES Area XIV (EU)

YEAR	BEL	DEN	GER	SPN	FRA	IRL	NED	POR	UK	TOT
2000	0	0	0	0	0	0	0	0	0	0
2001	0	0	0	0	0	0	0	0	0	0
2002	0	0	0	0	0	0	0	0	30,080	30,080
2003	0	0	0	0	0	0	0	0	215,741	215,741
2004	0	0	0	0	0	0	0	0	231,826	231,826
2005	0	0	0	0	0	0	0	0	261,337	261,337
2006	0	0	0	0	0	0	0	0	0	0
2007	0	0	0	0	0	0	0	0	0	0
2008	0	0	0	0	0	0	0	0	0	0

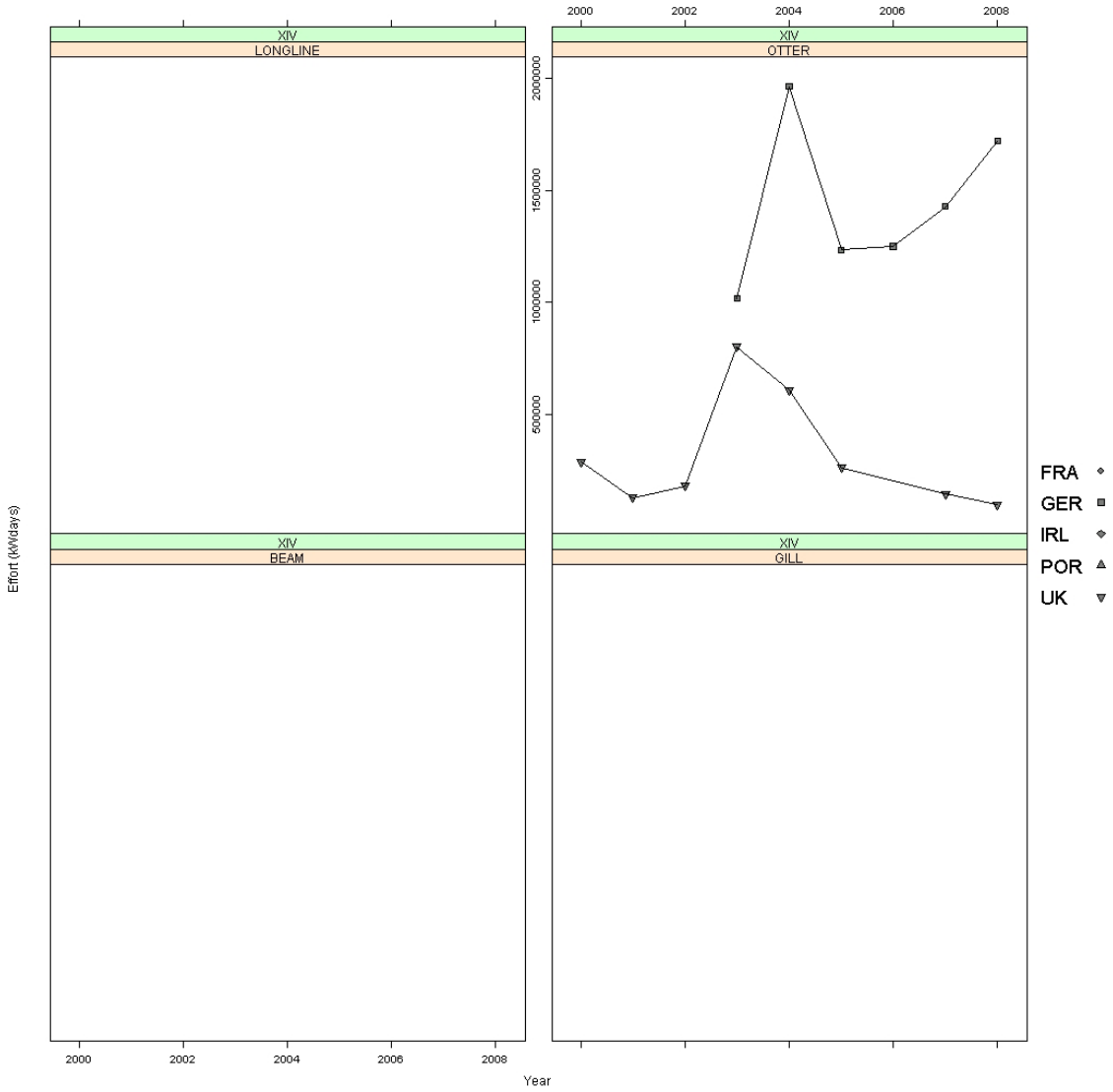

Figure 3.3.13.1 Deep Sea Effort (kwdays) 2000-2008 by gear and country ICES Area XIV

Catch and catch composition

Catches of Annex I species were very limited and mainly confined to the early part of the data series (Figures 3.3.13.2 to 3.3.13.5). Vessels operating in this area are most likely targeting Greenland halibut and redfish. The most noticeable species was round nosed grenadier taken in the coastal states region of XIVb and catches of this species have been fairly stable throughout the series.

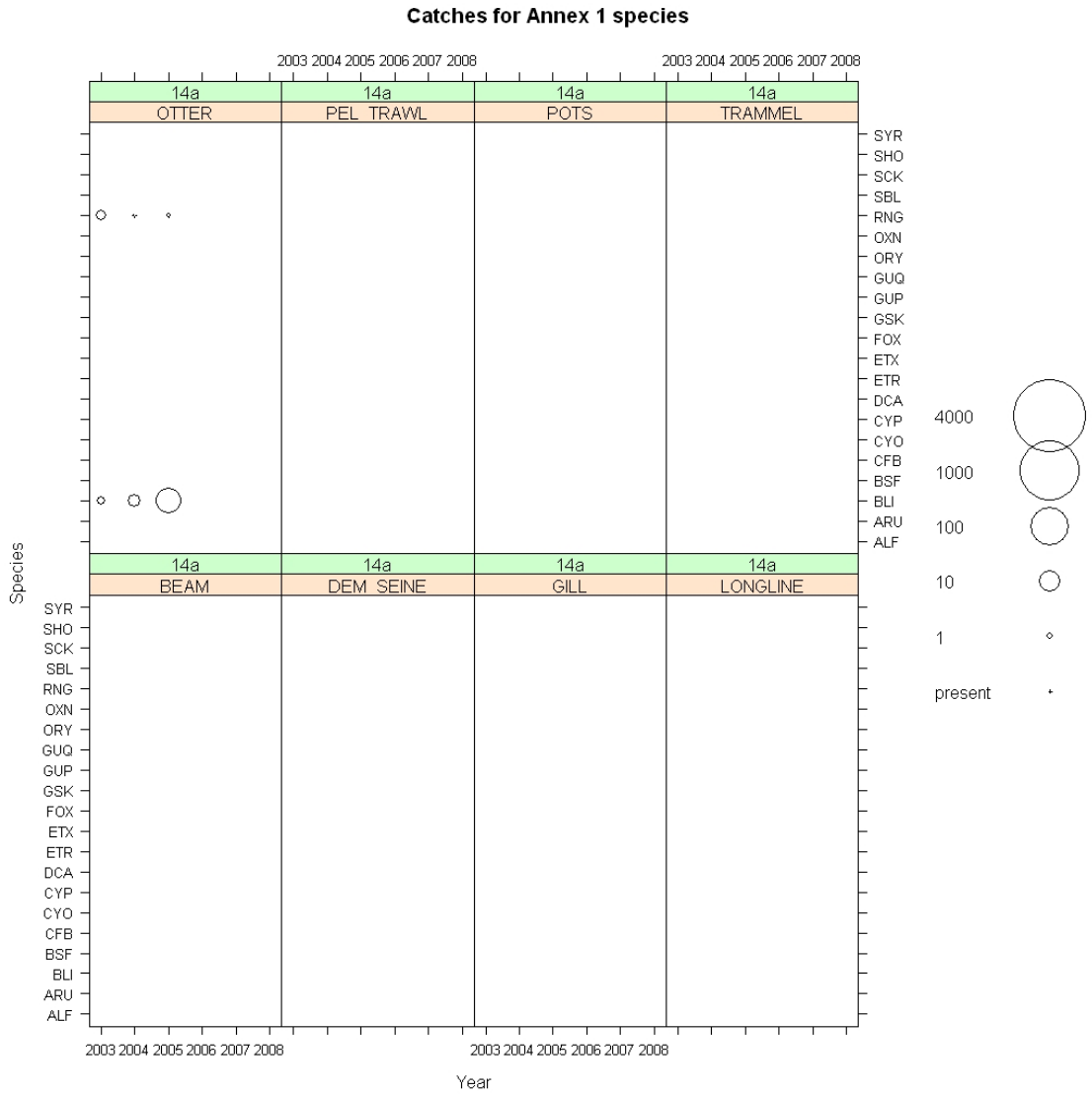

Figure 3.3.13.2 Catches for Annex 1 species.

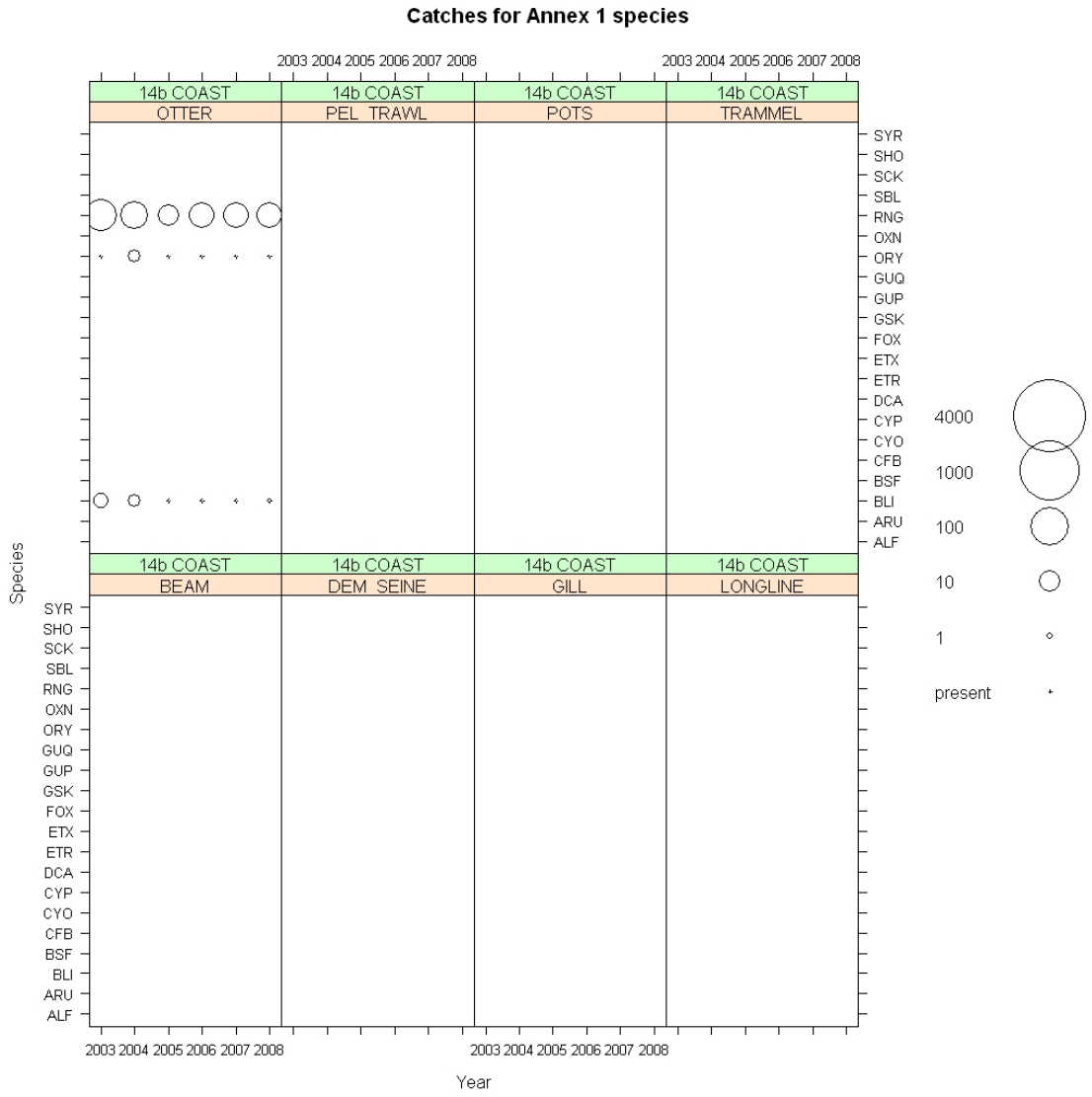

Figure 3.3.13.3 Catches for Annex 1 species.

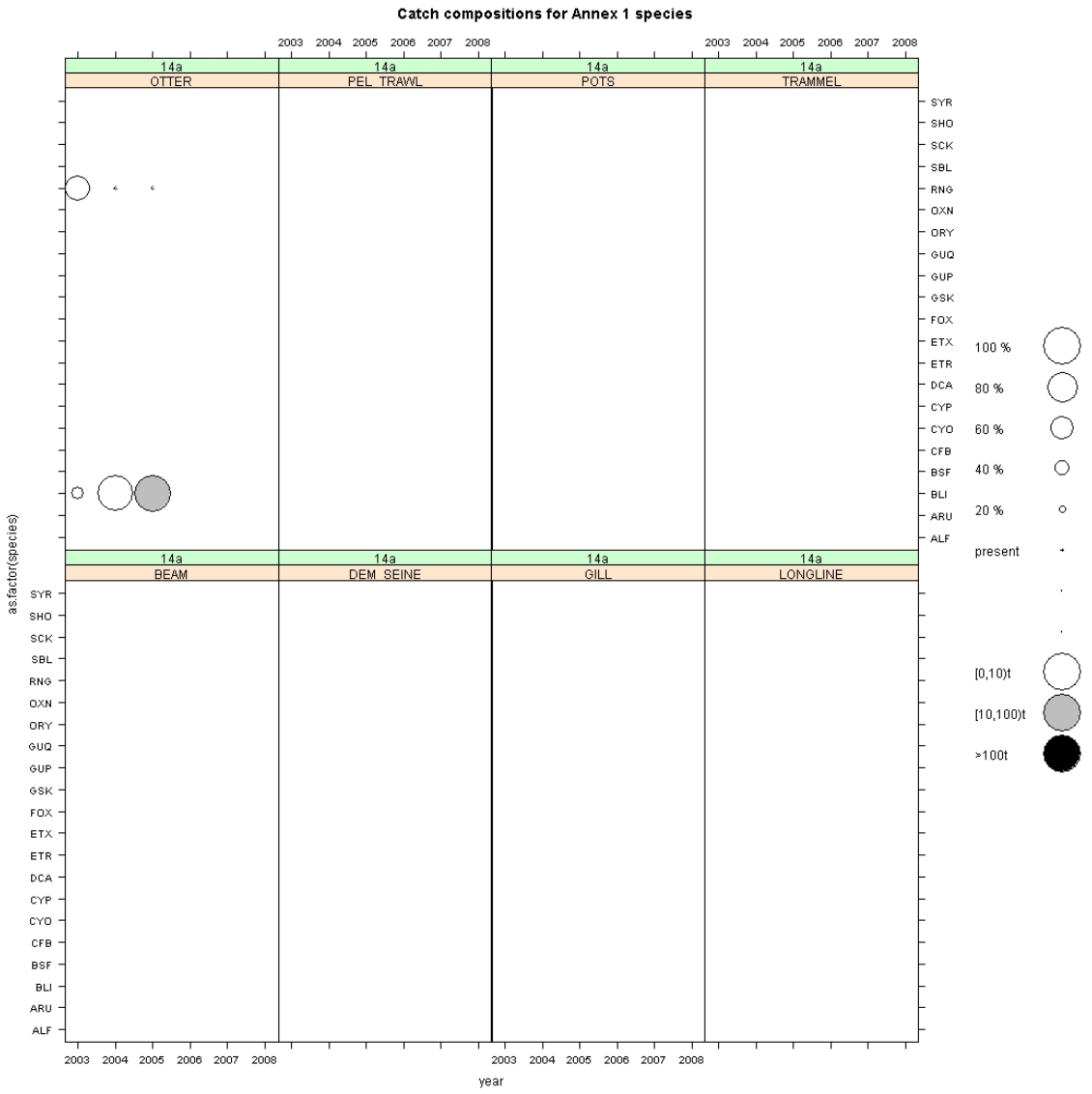

Figure 3.3.13.4 Catches for Annex 1 species.

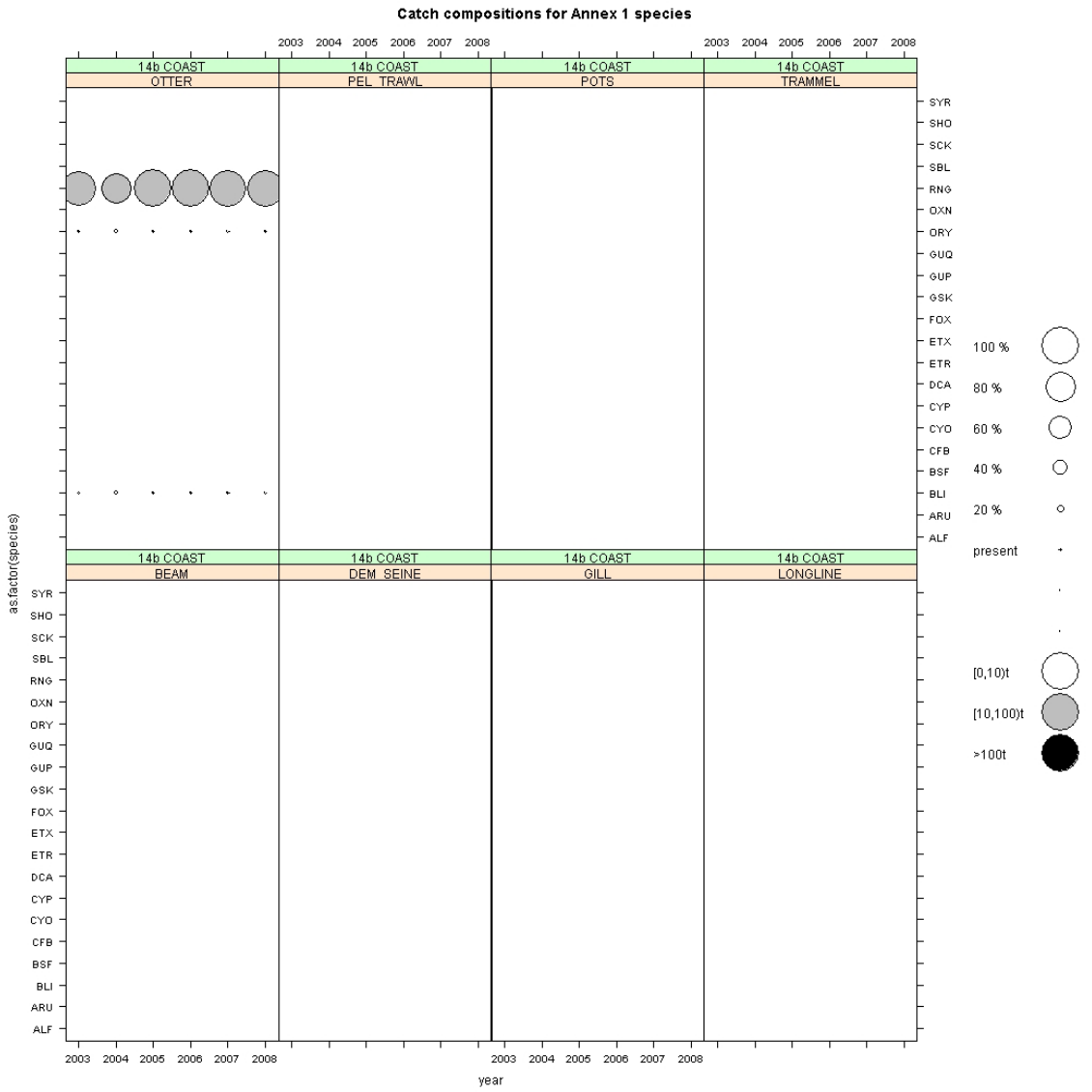

Figure 3.3.13.5 Catches for Annex 1 species.

3.3.14. Deep Sea CECAF Area 34.1.1

Effort

A small amount of effort in CECAF 34.1.1 was recorded by Portugal (tables 3.3.14.1 and 3.3.14.2 and Figure 3.3.14.1. Most of the effort in 2006 was in the EU part of the region although in the last two years more was recorded from other parts. (Data from Spain was not submitted to SGMOS)

Table 3.3.14.1 Deep Sea Effort (kwdays) 2000-2008 by country CECAF Area 34.1.1 (total)

YEAR	BEL	DEN	GER	SPN	FRA	IRL	NED	POR	UK	TOT
2000	0	0	0	0	0	0	0	0	0	0
2001	0	0	0	0	0	0	0	0	0	0
2002	0	0	0	0	0	0	0	0	0	0
2003	0	0	0	0	0	0	0	0	0	0
2004	0	0	0	0	0	0	0	0	0	0
2005	0	0	0	0	0	0	0	0	0	0
2006	0	0	0	0	0	0	0	22,250	0	22,250
2007	0	0	0	0	0	0	0	99,498	0	99,498
2008	0	0	0	0	0	0	0	37,972	0	37,972

Note: Effort by Portugal from 2006 was longline

Table 3.3.14.2 Deep Sea Effort (kwdays) 2000-2008 by country CECAF Area 34.1.1 (EU)

YEAR	BEL	DEN	GER	SPN	FRA	IRL	NED	POR	UK	TOT
2000	0	0	0	0	0	0	0	0	0	0
2001	0	0	0	0	0	0	0	0	0	0
2002	0	0	0	0	0	0	0	0	0	0
2003	0	0	0	0	0	0	0	0	0	0
2004	0	0	0	0	0	0	0	0	0	0
2005	0	0	0	0	0	0	0	0	0	0
2006	0	0	0	0	0	0	0	21,937	0	21,937
2007	0	0	0	0	0	0	0	25,135	0	25,135
2008	0	0	0	0	0	0	0	11,634	0	11,634

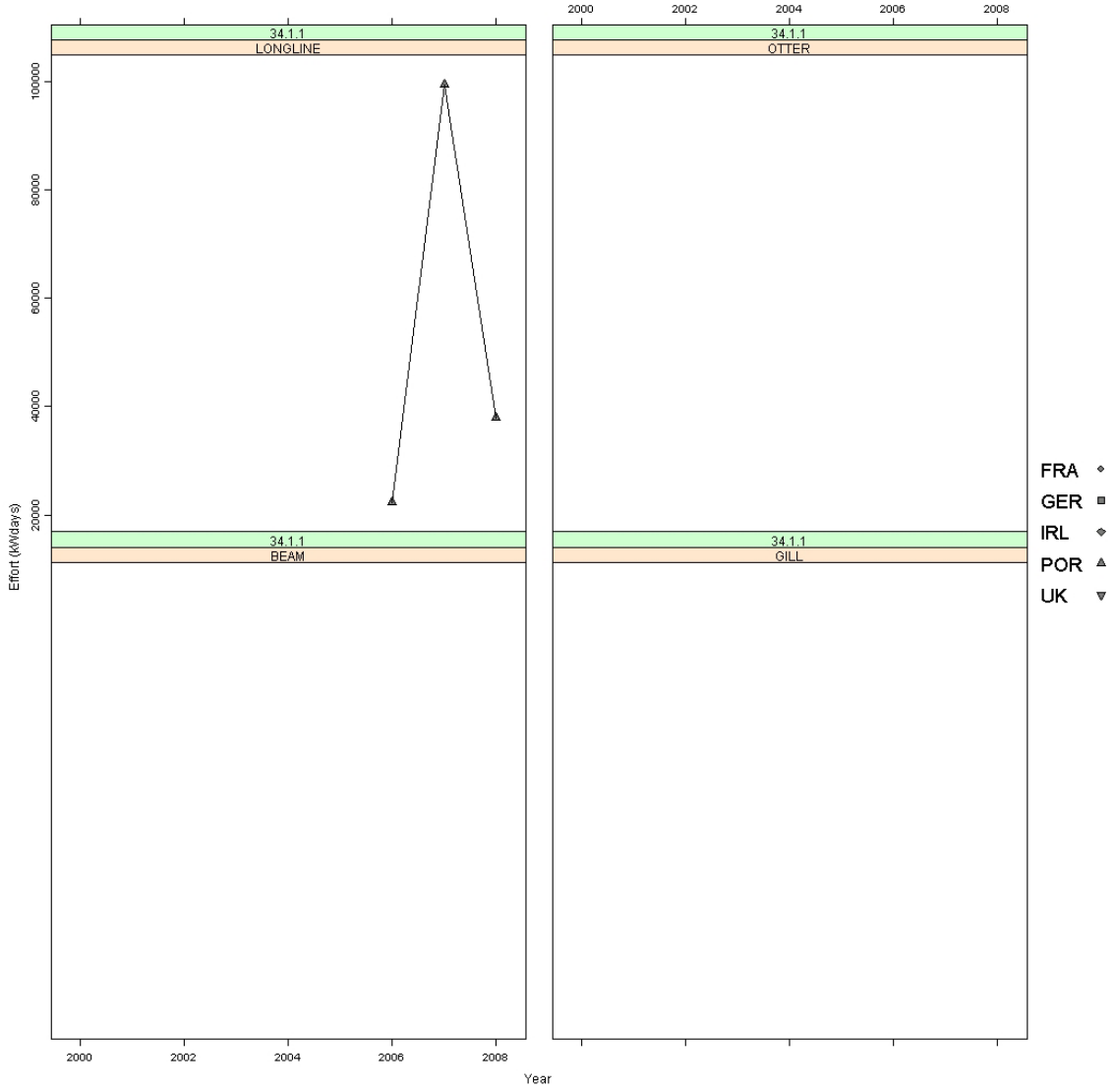

Figure 3.3.14.1 Deep Sea Effort (kwdays) 2000-2008 by gear and country CECAF Area 34.1.1

Catch and catch composition

Catches in both parts of this area were mainly of shark species in the longline fishery (Figures 3.3.14.2 to 3.3.14.5); Portuguese dogfish was the main species. Forkbeards were also important in the EU part

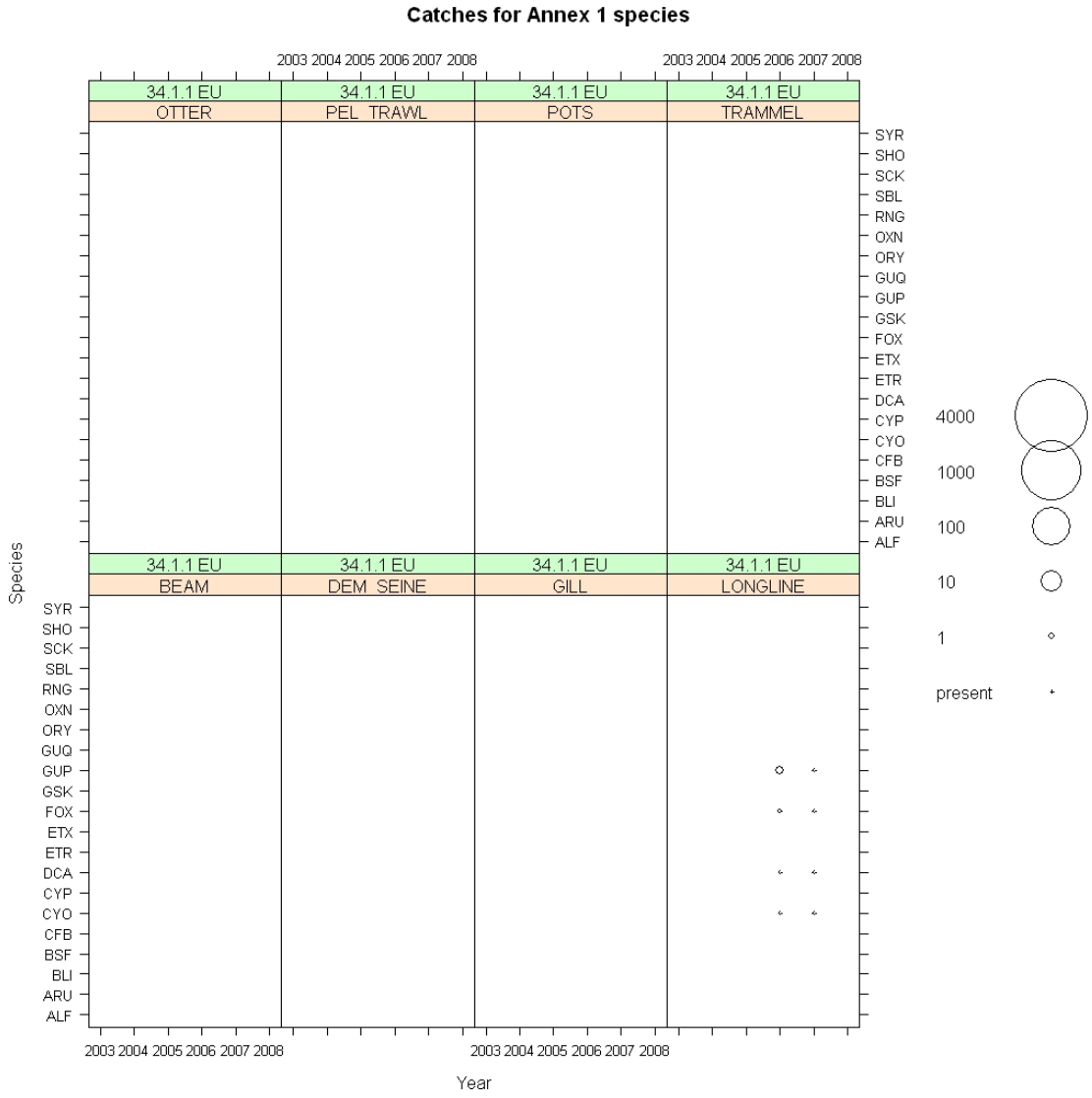

Figure 3.3.14.2 Catches for Annex 1 species.

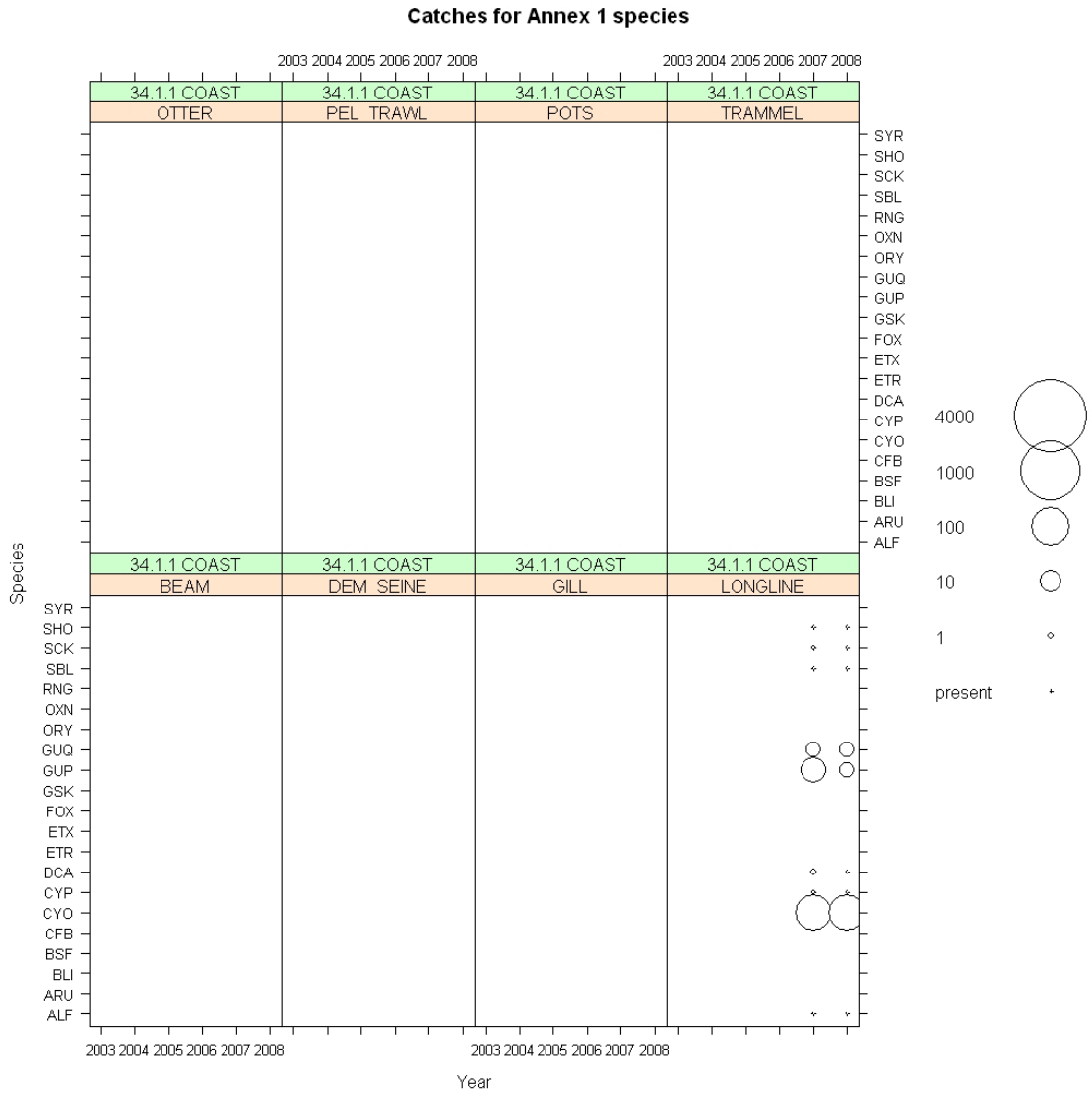

Figure 3.3.14.3 Catches for Annex 1 species.

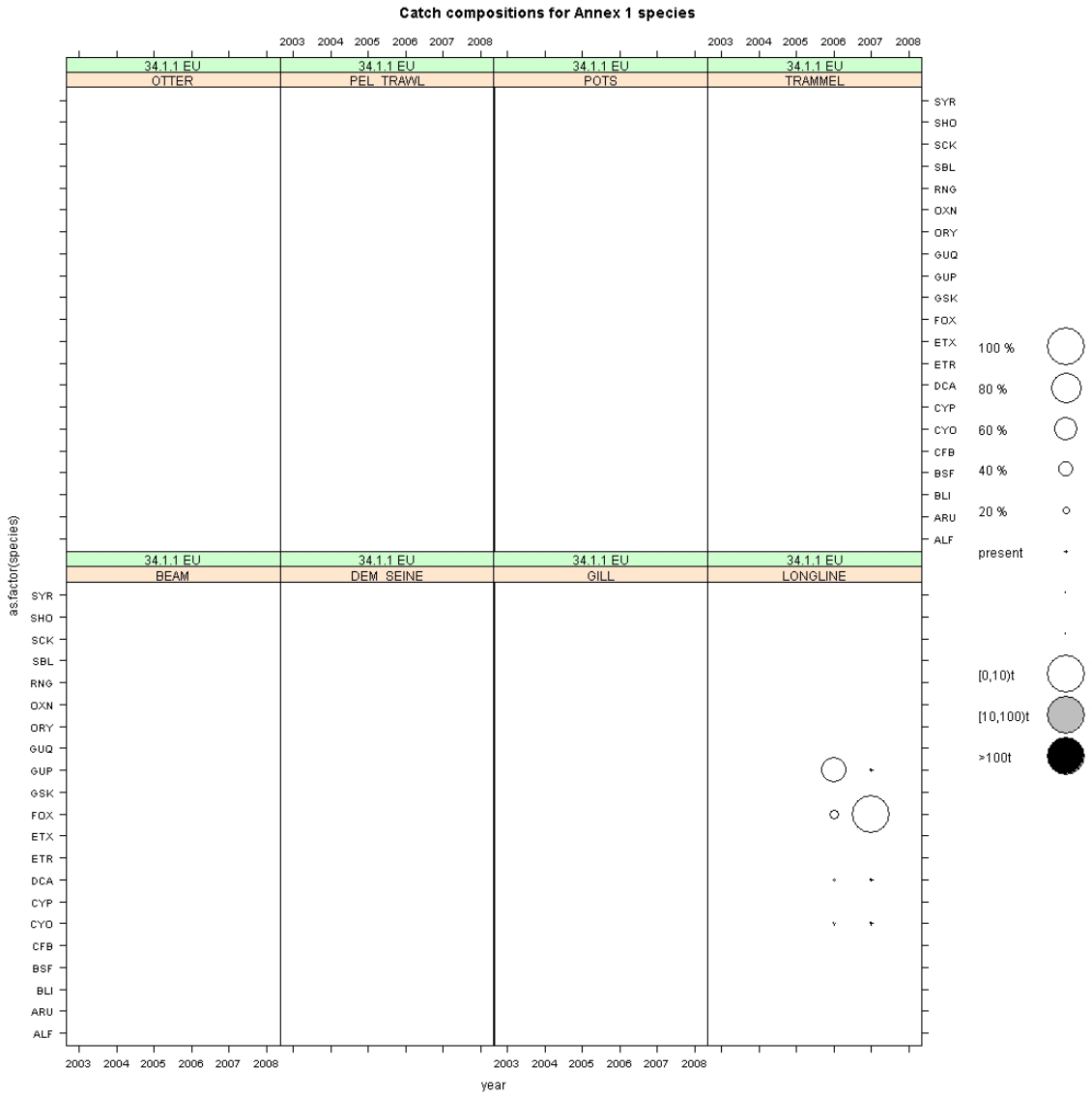

Figure 3.3.14.4 Catches for Annex 1 species.

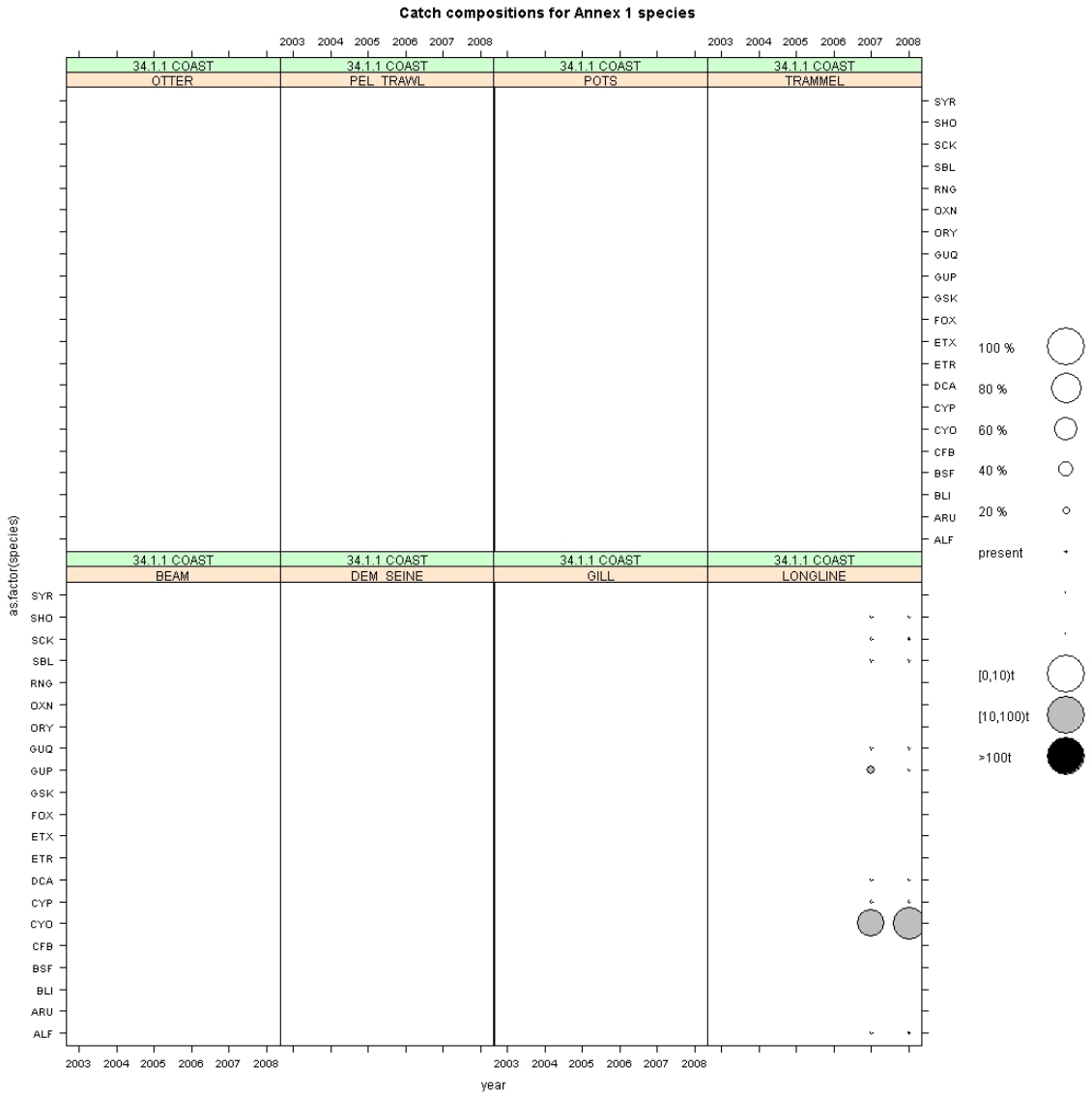

Figure 3.3.14.5 Catches for Annex 1 species.

3.3.15. Deep Sea CECAF Area 34.1.2

Effort

All effort in CECAF 34.1.2 was in EU waters and recorded by Portugal (No data was submitted to the WG by Spain (Table 3.3.15.1). Effort is all by longline and there has been an increasing trend over the last 3 years (Figure 3.3.15.1).

Table 3.3.15.1 Deep Sea Effort (kwdays) 2000-2008 by country CECAF Area 34.1.2 (total)

YEAR	BEL	DEN	GER	SPN	FRA	IRL	NED	POR	UK	TOT
2000	0	0	0	0	0	0	0	0	0	0
2001	0	0	0	0	0	0	0	0	0	0
2002	0	0	0	0	0	0	0	0	0	0
2003	0	0	0	0	0	0	0	0	0	0
2004	0	0	0	0	0	0	0	0	0	0
2005	0	0	0	0	0	0	0	0	0	0
2006	0	0	0	0	0	0	0	12,655	0	12,655
2007	0	0	0	0	0	0	0	75,762	0	75,762
2008	0	0	0	0	0	0	0	86,823	0	86,823

Note: Effort by Portugal from 2006 was longline

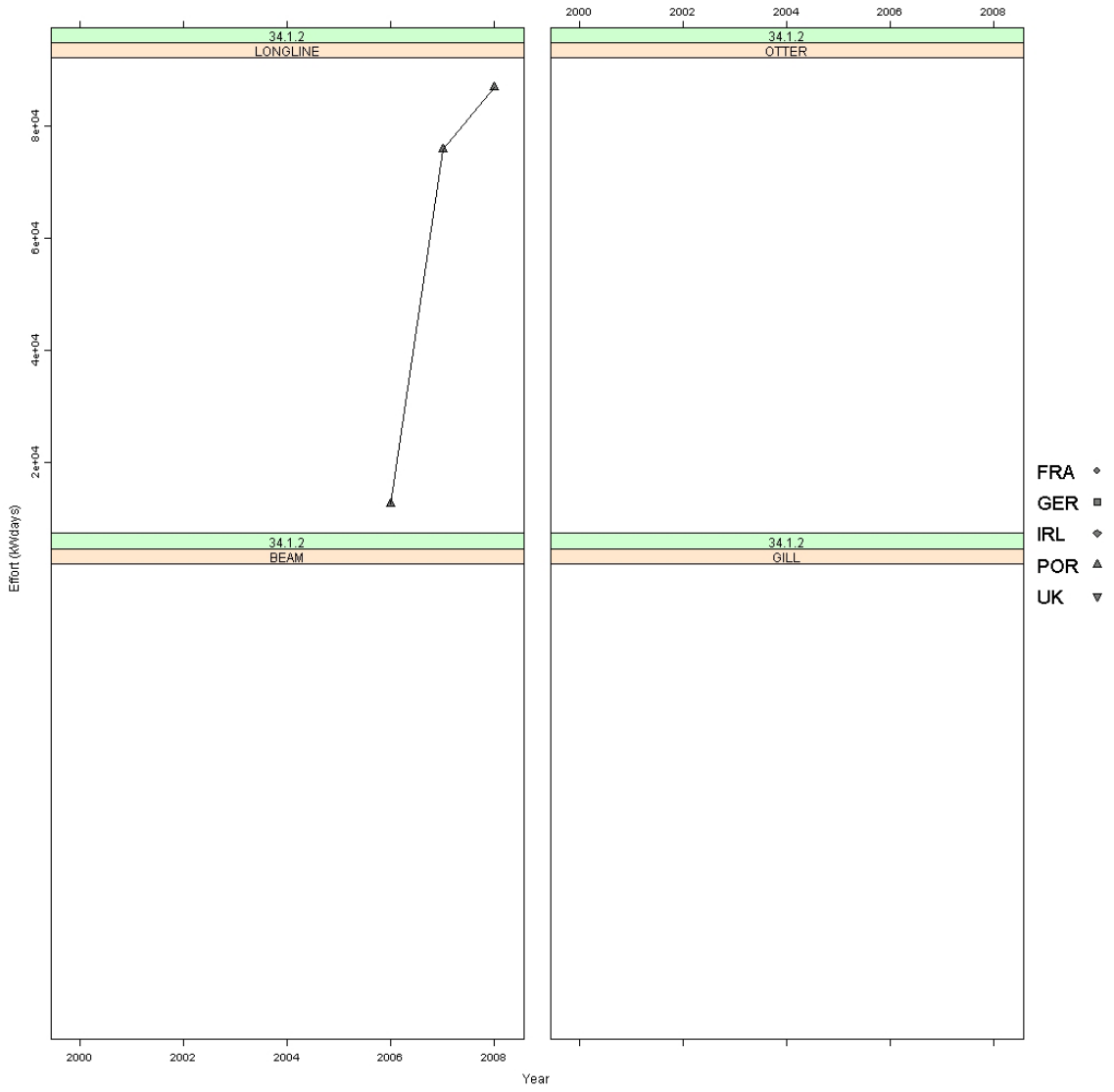

Figure 3.3.15.1 Deep Sea Effort (kwdays) 2000-2008 by gear and country CECAF Area 34.1.2

Catch and catch composition

Figure 3.3.15.2 and Figure 3.3.15.3 show that this fishery was mainly on black scabbardfish.

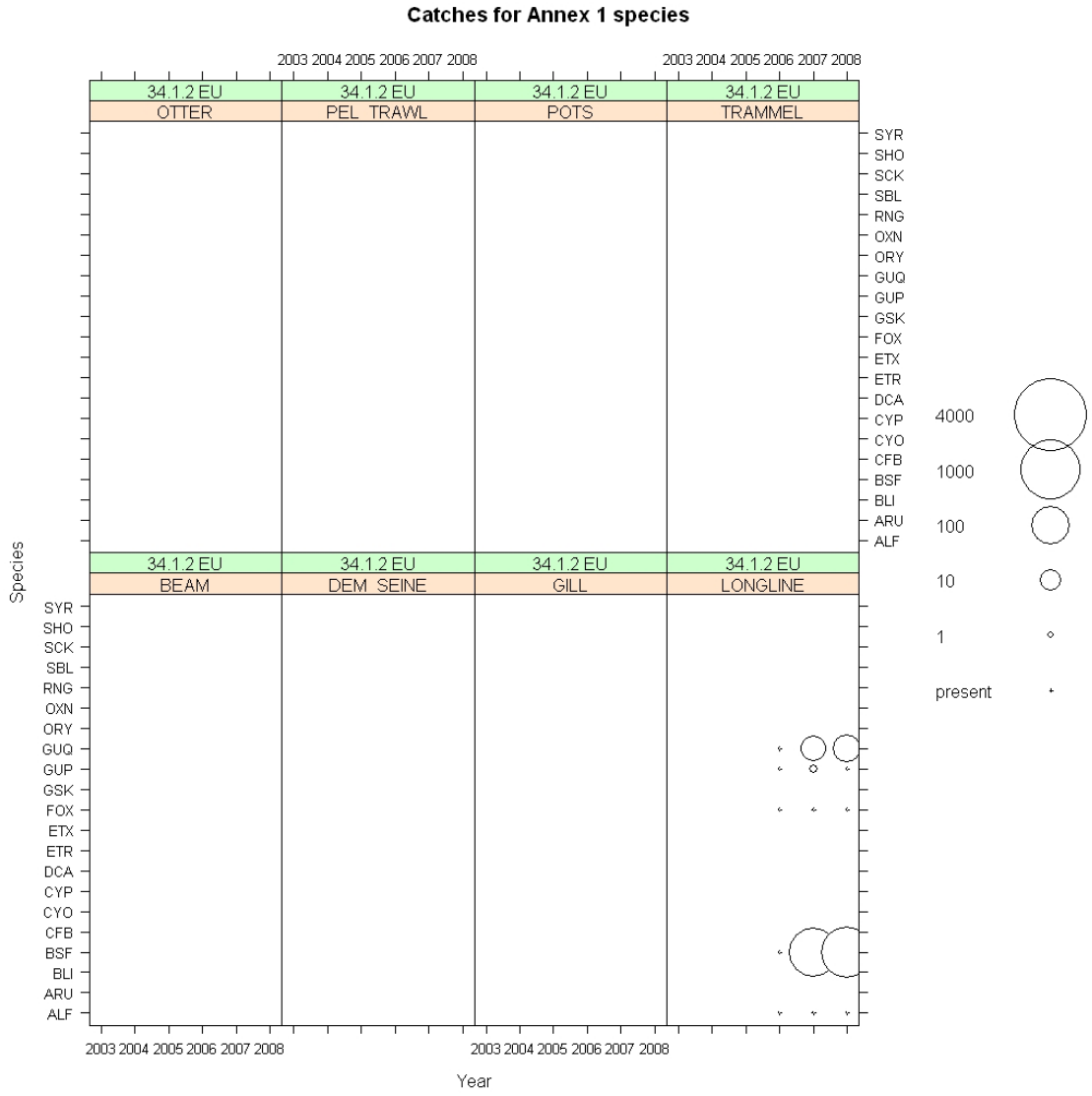

Figure 3.3.15.2 Catches for Annex 1 species.

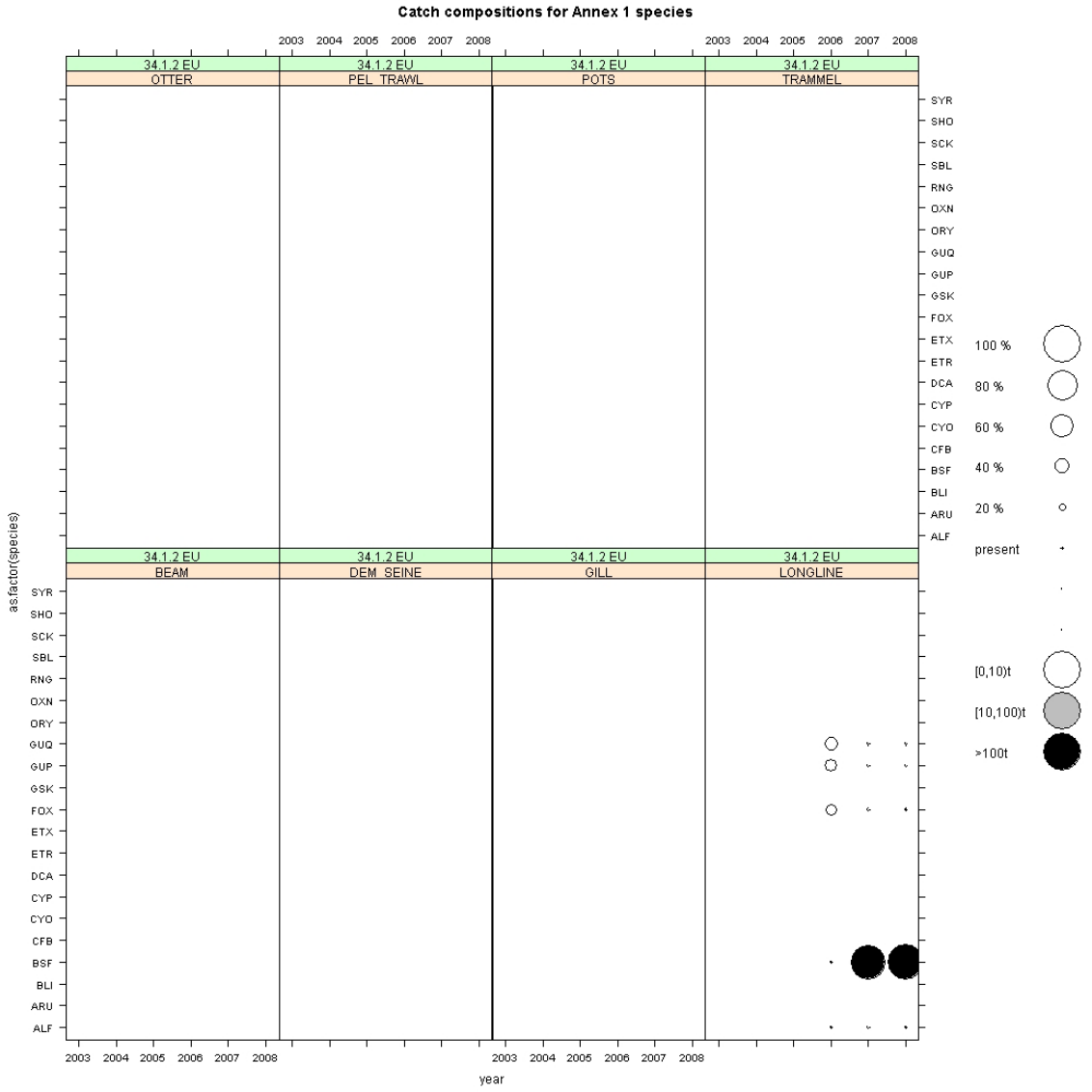

Figure 3.3.15.3 Catches for Annex 1 species.

3.3.16. Deep Sea CECAF Area 34.1.3

Effort

Only a very small amount of deep sea effort was recorded in this area by the Netherlands and Portugal and only in 2004 . Portuguese effort was by longline, Netherlands was not specified. No data were submitted to the group by Spain

Table 3.3.16.1 Deep Sea Effort (kwdays) 2000-2008 by country CECAF Area 34.1.3 (total)

YEAR	BEL	DEN	GER	SPN	FRA	IRL	NED	POR	UK	TOT
2000	0	0	0	0	0	0	0	0	0	0
2001	0	0	0	0	0	0	0	0	0	0
2002	0	0	0	0	0	0	0	0	0	0
2003	0	0	0	0	0	0	0	0	0	0
2004	0	0	0	0	0	0	22,944	3,192	0	26,136
2005	0	0	0	0	0	0	0	0	0	0
2006	0	0	0	0	0	0	0	0	0	0
2007	0	0	0	0	0	0	0	0	0	0
2008	0	0	0	0	0	0	0	0	0	0

Note: Effort by Portugal in 2004 was longline. Netherlands not specified.

Catches were too sparse to merit comment.

3.3.17. Deep Sea CECAF Area 34.2.0

Effort

There was no effort or catches in this area

3.4. Review of species lists in Annex I and II

SGMOS was asked to review the species lists of annex I and II of Regulation 2347/2002 according to the following criteria:

a) In the fisheries identified, are there any other deep-sea species being caught in quantities that would merit inclusion in Annex I or II? For example: *Phycis* spp., *Alepocephalus bairdii*

b) Are there any species listed in the annexes often or predominantly caught in fisheries that target non-deep-sea species? If so, should they continue to be included in the list of deep-sea species in Annexes I and II?

c) Could the species listed in Annex I and II be grouped into

Species that based on their life history characteristics are particularly vulnerable to fishing and should therefore not be exploited

Species that based on their life history characteristics are less vulnerable to fishing and could thus be sustainably exploited

d) Following from the exercise described under point 1), could the species listed in Annex I and II be according to target/bycatch species combining all fisheries observed.

The Sub-group considered that all the above TORs could be addressed by a series of tables accompanied by some explanatory text. The Sub-group noted that members present did not include experts on Nordic stocks. However, the members present endeavoured to review the species found mainly in the Nordic area using available information in the literature etc.

3.4.1. Annex I

As a first step, species currently in Annex I were ranked into three vulnerability categories according to; (1) intrinsic biological factors such as longevity, growth rate and age of maturity; and (2) other factors influencing vulnerability to fishing e.g. fisheries on aggregations and fisheries that may focus on a particular sexual component of a species e.g. female *Centroscymnus coelolepis* (Table 1).

Species were labelled as **deep** (defined as occurring at depths greater than 400 m for the bentho-pelagic phase of their life history and **deep/shallow** where at some point in their bento-pelagic phase of their life-history they may support fisheries at depths less than 400m, but where most of the species biomass is found at depths greater than 400 m e.g. red (blackspot) seabream. This categorisation thus creates a group of Deep Sea species 'deep' that can be considered mutually exclusive of shelf fisheries and a group 'deep-shallow' that are part of the Deep Sea fish assemblage, but cannot be assumed to be mutually exclusive of shelf fisheries.

It was noted that the life history stages of some species span a large geographical area (and cross management units) and such species may be more vulnerable to fishing if fisheries target particular life stages e.g. for black scabbardfish - juveniles to the west of Scotland and spawning aggregations off Madeira.

The group recognised that the depth distribution of some species may vary according to geographical area e.g. *Phycis blennoides* is commonly found between 2-300 m off the coast of Portugal whereas it is more commonly distributed between 5-600 m off the west of Scotland.

The life history characteristic data and information used was an update of that included in recent ICES WGDEEP reports.

Species were flagged as targeted (T) or bycatch (B) on the basis of general knowledge of fisheries rather than on a structured approach based on catch composition criteria.

Some species were identified as mixed targeted (mixed T) and this refers to fisheries that target 3-4 species e.g. French trawl fishery in VI and VII.

All the species in Table 3.4.1 are currently in Annex I. No species currently in Annex I were deleted.

Table 3.4.1 Commercially exploited deep-water species in the ICES area currently in Annex I, ranked into 3 vulnerability categories (Category 1 – most vulnerable to Category 3 -least vulnerable) according to (1) longevity, growth rate and age of maturity and (2) other factors influencing vulnerability to fishing.

SPECIES	LONGEVITY (YEARS)	AGE OF MATURITY	GROWTH RATE (K (Y^{-1}))	OTHER ASPECTS OF VULNERABILITY	CATEGORY	DEEP/SHALLOW?	TARGET OR BYCATCH
Orange roughy (*H. atlanticus*)	169	20-30	0.06-0.07	High -aggregating	1	Deep	T
Roundnose grenadier	>60	9-14	0.06-0.13		2	Deep	Mixed T
Deep-water squalid sharks:-							
Centroscymnus coelolepis	Not known	All not known	All not known	All-species:- sexual dimorphism & segregation	1	Deep	B
Centrophorus squamosus	60-70				1	Deep	B
Centrophorus Granulosus	Not known				1	Deep	B
Dalatias licha	Not known				1	Deep	B
Centroscymnus crepiditer	Not known					Deep	B
Centroscyillium fabricii	Not known				1	Deep	B
Etmopterus princeps	Not known				1	Deep	B
Other sharks:-							
Deania calcea	All not known	All not known	All not known		2	Deep/shallow	B
Galeus melanostomus					2	Deep/shallow	B
Hexanchus griseus					1	Deep/shallow	B
Etmopterus spinax					2	Deep/shallow	B
Other shark species in Annex 1.					2	Deep/shallow	B
Blue ling (*Molva dypterygia*)	30	8	0.12 -0.20	High –some fisheries on spawning aggregations	2	Deep	T and mixed T
Greater argentine (*Argentina silus*)	35	8-9	0.17-0.20	Semi-pelagic, schooling	2	Deep/shallow	T
Black scabbardfish (*Aphanopus carbo*)	At least 18	6-7	0.12	Possible straddling stock	2	Deep	T and mixed T
Greater forkbeard (*Phycis blennoides*)	15?	Not known	Not known but gadoid		3	Deep/shallow	B
Alfonsino:							
Beryx decadactylus	13	Not known	0.11-0.17	Some fisheries on seamount aggregations	2	Deep	T/B
Beryx splendens	11	Not known	0.13-0.14		2	Deep	T/B

Greater argentine is a schooling, semi-pelagic species fished both pelagically and demersally, and this, coupled with the fact that it is relatively slow-growing and long-lived, suggests that it is moderately vulnerable to fishing (Category 2).

Roundnose grenadier is a very long-lived, slow growing species and therefore biologically it could be categorised as highly vulnerable (Category 1). However, there is no evidence to suggest that this

species is highly vulnerable to fishing, compared with very long-lived species supporting directed fisheries at aggregations e.g. fisheries for orange roughy. This species was allocated to Category 2.

The sharks were divided into two groups: (1) those that are mostly found at depths deeper than 400 m and for which their reproductive biology suggests they are highly vulnerable to fishing e.g the viviparous Portuguese dogfish and (2) those species which spend a significant proportion of their life histories at depths less than 400m for which their reproductive biology suggests they would be less vulnerable to fishing e.g. the ovoviparous *Galeus melanostomus*.

The Sub-group then reviewed the species currently listed in Annex II and identified those which should be moved to Annex I, largely because they are/have been taken in significant commercial quantities and are found predominantly in deep-water (Table 3.4.2). The justification for each species is described below.

Table 3.4.2 Commercially exploited deep-water species in the ICES area currently in Annex II that should be included in Annex I, ranked into 3 vulnerability categories (Category 1 – most vulnerable, Category 3 -least vulnerable) according to (1) longevity, growth rate and age of maturity and (2) other factors influencing vulnerability to fishing.

SPECIES	LONGEVITY (YEARS)	AGE OF MATURITY	GROWTH RATE (K (Y^{-1}))	OTHER ASPECTS OF VULNERABILITY	CATEGORY	DEEP/SHALLOW?	TARGET OR BYCATCH
Red (blackspot) seabream (*Pagellus bogaraveo*)	20	Not known	0.09-0.20	Protandric hermaprodite. Some fisheries on spawning aggregations	2	Deep/shallow	T
Deep-water red crab (*Chaceon* spp.)	Up to 30	Carapace width at maturity - 58-76% of max width	Not known	Segregated by sex related to depth	2	Deep	T
Chimaerid*s* (Rabbitfish inc. *Chimaera,Rhinochimeara,, Hydroloagus*)	26-30	Length of maturity 75% of max length	0.07-0.14	Low fecundity	2	Deep/shallow	B
Roughhead grenadier (*Macrourus berglax*)	At least 25	13-14	0.06		2	Deep	T
Moridae inc. *Mora*, *Antimora*	25				2	Deep	B
Black cardinalfish *(Epigonus telescopus)*	104	45	0.03		1	Deep	T/B
Bluemouth redfish *(Helicolenus dactylopterus)*	43	13	0.75		2	Deep/shallow	B
Smoothheads *Alepocephalid* spp. *(LHCs – A. Bairdii only)*	38		0.08		2	Deep	B
Wreckfish *(Polyproprion americanus)*	76	9-10	0.05-0.08		2	Deep/shallow	T

Justification:-

Red (blackspot) seabream – significant fisheries in Azores, Bay of Cadiz etc. Also included in current EU Deep-water TAC and quota Regulations.

Deep-water red crab – significant trap fisheries to the west of Scotland, Porcupine etc. Fisheries are not well described but from a precautionary standpoint this species has been allocated to Category 2.

Chimaerids – bycatch in the mixed trawl fishery in VI and VII. Allocated to Category 2 on the basis of slow growth and low fecundity

Roughhead grenadier – predominantly taken as bycatch in the trawl and longline fisheries targeting Greenland halibut in I and II and in the mixed-species demersal trawl fisheries in VI,VII and XII. Allocated to Category 2 on the basis of late age of maturity.

Moridae (including *Mora moro* and *Antimora rostrata*) – taken in the mixed-species demersal trawl fisheries in VI,VII and XII and a mixed longline-fishery in VIII, IX and X. Limited information available on life history characteristics from a precautionary standpoint this species has been allocated to Category 2.

Epigonus telescopus-mostly taken as a bycatch in orange roughy fisheries. Very long-lived, exceptionally late maturing and slow growing – allocated to Category 1

Helicolenus dactylopterus:- taken in significant quantities in multi-species longline fisheries in VIII, IX and X and in the mixed-species demersal trawl fisheries in VI,VII and XII. Life history characteristics indicate that this species has intermediate vulnerability - Category 2.

Alepocephalid spp. (including *Alepocephalus bairdii* and *A. rostratus*) – has been taken in significant quantities as a bycatch in trawl fisheries in VI,VII and XII. Landings now reduced. From a precautionary standpoint this species has been allocated to Category 2.

Polyproprion americanus -significant landings in mixed longline fishery in IXb and X. From a precautionary standpoint this species has been allocated to Category 2.

The Sub-group were of the view that a number of species not currently in Annex I and II should be included in Annex I (Table 3).

Table 3.4.2 Commercially exploited deep-water species in the ICES area currently not in Annex I and II that could be included in Annex I, ranked into 3 vulnerability categories (Category 1 – most vulnerable, Category 3 -least vulnerable) according to (1) longevity, growth rate and age of maturity and (2) other factors influencing vulnerability to fishing.

SPECIES	LONGEVITY (YEARS)	AGE OF MATURITY	GROWTH RATE (κ (Y^{-1}))	OTHER ASPECTS OF VULNERABILITY	CATEGORY	DEEP/SHALLOW?	TARGET OR BYCATCH
Sebastes mentella – slope demersal stock	75	10-13	0.05 – 0.10		2	Deep	T
Greenland halibut	30	9-15	0.06	Highly migratory – some life stage components may be vulnerable to fishing	2	Deep/shallow	T

S. mentella - It is now recognised that there are 3 stocks in the NE Atlantic: deep pelagic, shallow pelagic and slope demersal. The pelagic stocks, in common with other species such as blue whiting,

should not be treated as deep-water for fisheries management purposes. On the basis of life history characteristics this slope demersal stock was allocated to Category 2.

Greenland halibut – this species was allocated to Category 2 from a precautionary standpoint and because some life stage components may be highly vulnerable to fishing e.g. juveniles and spawning aggregations.

3.4.2. Additional comments on anglerfish, tusk and ling

Ling was not considered as a deep-water species as most of the species distribution is in depths shallower than 400 m. Regarding anglerfish and tusk, the Sub-group considered the inclusion of these in Annex I because these species have a wider range of depth distribution (down to 1000 m) than ling, but decided this was inappropriate because it is likely that most of the biomass of these species is distributed in depths shallower than 400 m.

3.4.3. Annex II

The following species were removed from Annex II as they are found mostly at depths shallower than 400m:-

Conger eel

Sebastes viviparus

Lycodes esmarkii

Lepidopus caudatus (silver scabbardfish) was excluded as it is a meso-pelagic species.

The following species should remain in Annex II:-

Raja hyperborea - bycatch

Trachyscorpia cristulata- bycatch

Raja nidarosciensus -bycatch

Raja fyllae –bycatch

Hoplostethus mediterraneus

The following new species should be included in Annex II because the biological information collected may be useful to identify indicators of the impact of fishing on the deep ecosystem (most are larger fish and are predators high in the food chain):

Macrourid spp. other than *C. rupestris and M. Berglax* -bycatch

Cataetyx laticeps - bycatch

Other skates than those listed above -bycatch

Notocanthus chemnitzi- bycatch

Nesiarchus nasutus- bycatch

Benthodesmus elongatus- bycatch

All species proposed for Annex II are likely to fall in Category 2. The biological information available is insufficient to differentiate further.

3.5. Discussion on the vulnerability and exploitation of deep sea species I

There are no extant scientific reasons for not exploiting deep-water fish and shellfish species in the NE Atlantic. Even fisheries for the most vulnerable species, such as orange roughy, are likely to be sustainable if catches [exploitation rate] are maintained at sufficiently low levels. For example, stock reduction analyses of orange roughy in VI indicate that MSY may be around 150-250 t whereas in the early years of this fishery annual catches amounted to several thousand tonnes.

The key issue as to whether deep-water species can be exploited sustainably is the extent, efficacy and compliance of management and monitoring. It is evident that management frameworks and approaches in place in recent years have not been effective in achieving sustainability. Management by TACs and quotas is unlikely to be an effective management tool because the relationship between F and catches is unknown in most fisheries. Furthermore, many fisheries are of a mixed species nature and management by TACs and quotas, particularly where these are restrictive for some species, is likely to lead to high-grading and higher levels of discarding. In contrast, effort management, particularly at the fisheries rather than at the stock level, is more likely to be effective as there is an underlying relationship between F and effort.

Difficulty of bycatch

Effective monitoring is essential and this should include multinational coordinated fisheries-independent surveys to generate reliable abundance indices for use in assessments. Without such data the scientific justification for exploiting these stocks would be seriously compromised. Effective observer schemes are also essential and it may be necessary to have 100% coverage in international waters (as in the NAFO Regulatory Area) and particularly in some fisheries e.g. orange roughy.

A general concern is the high level of discarding on deep-water trawl fisheries. Most of these fish die and as a consequence long-term exploitation could have a significant impact on the general deep-water fish assemblage and ecosystem as a whole. This needs to be monitored on an ongoing basis and provides another justification for the development of extensive fisheries-independent surveys.

Most deep-water fisheries in the NE Atlantic are currently being ratcheted down to a low level in line with ICES advice, and these should only be allowed to expand when information becomes available as to the level of fishing that is sustainable, and for some stocks, where there is reliable evidence of stock recovery.

While current deep-water fisheries may be of minor economic significance, they have in the past generated substantial landings and have been of high socio-economic importance to many countries. If the stocks are exploited sustainably economic returns are likely to be lower but nevertheless important to some regional communities.

A 3-year FP7 Project 'DEEPFISHMAN' has just commenced, the aim of which is to develop a short- and long-term management and monitoring framework for deep-water stocks/fisheries in the NE Atlantic. The outputs from this project should be useful in addressing the urgent need for further development of management and monitoring of deep-water fisheries.

4. WESTERN WATERS

4.1. Background

Details of the Western Waters regulations and its geographical extent can be found in the regulation COUNCIL REGULATION (EC) No 1415/2004.

SGMOS experienced extreme difficulties in preparing these data and the interpretation of them is confounded by uncertainty in the western waters data summaries for some member states most notably France and Spain. **SINCE THESE COUNTRIES OPERATE EXTENSIVELY IN THE WESTERN WATERS AREAS AND ARE LIKELY TO CONTRIBUTE A SIGNIFICANT PROPORTION TO THE OVERALL EFFORT COVERED BY THIS REGULATION, THE DATA SHORTFALL IMPLIES THAT OVERALL EFFORT FIGURES ARE UNRELIABLE AND SHOULD NOT BE USED AT THIS TIME.**

The SGMOS database records effort in the areas covered by the Western waters regulation including effort which becomes categorised as 'deep sea'. Since these two regulations are legislated to be non-overlapping, columns are included to show the western waters effort without the deep sea.

Columns are also included showing the member state values of expended effort reported direct to the Commission under the Regulation – in general this information is rather sparse compared to the data supplied under the call prior to this SGMOS meeting. Western waters effort is subject to a cap for each member state, this is shown just below the country name.

4.2. Fishing effort and catch composition in Western Waters

The presentation of effort data under the Western Waters regulation is presented in three sections covering demersal effort, crab effort and scallop effort. In the case of the demersal effort, overall information by vessel size groups is then followed by an effort by gear breakdown and then followed by information on landings composition.

4.2.1. Demersal

4.2.1.1. Western Waters Area V-VI

Effort

Most of the effort in this area is by vessels over 15m (Table 4.2.1.1.1 and 4.2.1.1.2). Only Ireland and UK recorded significant effort for the smaller category (over 10m <15m) amounting to 2% and 20% respectively of their overall effort totals in 2008. Spain, France, Ireland and UK contributed most effort in the over 15m vessel sizes. All countries recorded marked declines in effort over the time period. French effort in this region appears to be seriously in error since negative values appear in the table. Overall effort figures are unreliable.

Table 4.2.1.1.2 shows the effort broken down by gear type. Otter trawling and gill netting were the most important gears deployed by both the smaller vessels and the larger ones. Longlining and demersal seine netting was also important for UK vessels.

Catch composition

Figure 4.2.1.1.1 shows the species composition taken by different gears. Ostensibly, otter trawling comprised a mixed catch with haddock, saithe, megrim (?) and Nephrops the main species. However, in this region a wide variety of otter trawel fisheries take place targeting rather different species and so the apparent composition is artificial. Gill netting and longlining were dominated by hake catches. Anglerfish were also relatively important in gill nets in this area.

Table 4.2.1.1.1 Effort (KWdays) by member state and vessel size group Western Waters Area V-VI

Area: V-VI, dem effort

				BEL 58,452			DEN 215,234			GER 186,370			SPN 2,460,000		
Length	Year	Total	NonDeepTotal	Reported	Total	Excl. Deep	Reported	Total	Excl. Deep	Reported	Total	Excl. Deep	Reported	Total	Excl. Deep
o10t15m	2000	1,810,368	1,810,368												
o10t15m	2001	1,783,452	1,783,452												
o10t15m	2002	1,694,073	1,693,849												
o10t15m	2003	2,000,629	2,000,629												
o10t15m	2004	1,925,222	1,918,228												
o10t15m	2005	1,768,470	1,768,470												
o10t15m	2006	1,766,363	1,766,363												
o10t15m	2007	1,828,899	1,828,899												
o10t15m	2008	1,677,077	1,677,077												
o15m	2000	31,523,620	13,140,891		27,240	27,240		64,965	64,965		542,729	542,729			
o15m	2001	31,182,588	12,082,331		10,308	10,308		98,165	98,165		469,960	469,960			
o15m	2002	28,043,887	10,321,077		5,595	5,595		130,437	130,437		218,589	218,589			
o15m	2003	26,323,859	10,572,184		19,005	19,005		222,476	222,476		542,251	280,399			
o15m	2004	23,169,580	8,654,065	15,910	15,910	15,910	55,277	91,088	91,088		361,180	106,812	1,904,040		
o15m	2005	22,706,845	10,444,911	8,029	8,027	8,027		35,292	35,292	149,446	511,346	141,906	1,905,031	3,101,611	3,101,611
o15m	2006	19,284,471	10,654,730	4,693	4,689	4,689		11,520	11,520	116,084	334,705	70,453	2,394,980	3,904,398	3,904,398
o15m	2007	18,062,913	10,148,878	2,528	2,527	2,527				135,254	321,926	321,926	2,310,254	3,060,745	3,060,745
o15m	2008	15,920,542	9,869,059					103,067	103,067	134,044	151,833	144,552	2,456,256	2,522,614	2,522,614
Total	2000	33,333,988	14,951,259		27,240	27,240		64,965	64,965		542,729	542,729			
Total	2001	32,966,040	13,865,783		10,308	10,308		98,165	98,165		469,960	469,960			
Total	2002	29,737,960	12,014,926		5,595	5,595		130,437	130,437		218,589	218,589			
Total	2003	28,324,488	12,572,813		19,005	19,005		222,476	222,476		542,251	280,399			
Total	2004	25,094,802	10,572,293		15,910	15,910		91,088	91,088		361,180	106,812			
Total	2005	24,475,315	12,213,381		8,027	8,027		35,292	35,292		511,346	141,906		3,101,611	3,101,611
Total	2006	21,050,834	12,421,093		4,689	4,689		11,520	11,520		334,705	70,453		3,904,398	3,904,398
Total	2007	19,891,812	11,977,777		2,527	2,527					321,926	321,926		3,060,745	3,060,745
Total	2008	17,597,619	11,546,136					103,067	103,067		151,833	144,552		2,522,614	2,522,614

CONT.

	FRA 11,649,154			IRL 2,324,932			NED 6,000			POR			UK 24,017,229			gsa dem-V-VI--
	Reported	Total	Excl. Deep	Reported	Total	Excl. Deep	Reported	Total	Excl. Deep	Reported	Total	Excl. Deep	Reported	Total	Excl. Deep	
		964	964		103,903	103,903								1,705,501	1,705,501	dem-V-VI-o10t15m-2000
					91,438	91,438								1,692,014	1,692,014	dem-V-VI-o10t15m-2001
					63,974	63,974								1,630,099	1,629,875	dem-V-VI-o10t15m-2002
		3,490	3,490		95,326	95,326								1,901,813	1,901,813	dem-V-VI-o10t15m-2003
					63,117	63,117								1,862,105	1,855,111	dem-V-VI-o10t15m-2004
					31,778	31,778								1,736,692	1,736,692	dem-V-VI-o10t15m-2005
					21,698	21,698								1,744,665	1,744,665	dem-V-VI-o10t15m-2006
					20,994	20,994								1,807,905	1,807,905	dem-V-VI-o10t15m-2007
					23,529	23,529								1,653,548	1,653,548	dem-V-VI-o10t15m-2008
		8,817,966	-1,241,184		2,287,303	1,833,757					96,288	96,288		19,687,129	11,817,096	dem-V-VI-o15m-2000
		8,024,147	-1,347,567		2,268,175	1,690,159					132,192	132,192		20,179,641	11,029,114	dem-V-VI-o15m-2001
		7,608,461	-1,317,150		1,409,324	1,184,326		10,592	10,592		142,528	142,528		18,518,361	9,946,160	dem-V-VI-o15m-2002
		6,190,736	-1,416,189		1,988,072	1,690,844		9,840	9,840					17,351,479	9,765,809	dem-V-VI-o15m-2003
		5,533,373	-1,601,340		1,611,722	1,401,837					164,836	164,836	13,117,722	15,391,471	8,474,922	dem-V-VI-o15m-2004
	1,170,980	5,943,667	-1,166,330	1,101,380	1,277,746	1,049,859					153,738	153,738	5,576,278	11,675,418	7,120,808	dem-V-VI-o15m-2005
	2,657,054	4,391,583	-1,087,018	1,402,725	1,417,974	1,354,295							5,440,400	9,080,386	6,257,177	dem-V-VI-o15m-2006
	834,206	4,519,459	-1,028,754	725,829	1,408,939	1,248,337							6,176,497	8,749,317	6,544,097	dem-V-VI-o15m-2007
	981,090	3,958,462	-759,419	576,162	1,176,283	1,047,676							5,342,931	8,008,283	6,810,569	dem-V-VI-o15m-2008
		8,818,930	-1,240,220		2,391,206	1,937,660					96,288	96,288		21,392,630	13,522,597	dem-V-VI-Total-2000
		8,024,147	-1,347,567		2,359,613	1,781,597					132,192	132,192		21,871,655	12,721,128	dem-V-VI-Total-2001
		7,608,461	-1,317,150		1,473,298	1,248,300		10,592	10,592		142,528	142,528		20,148,460	11,576,035	dem-V-VI-Total-2002
		6,194,226	-1,412,699		2,083,398	1,786,170		9,840	9,840					19,253,292	11,667,622	dem-V-VI-Total-2003
		5,533,373	-1,601,340		1,674,839	1,464,954					164,836	164,836		17,253,576	10,330,033	dem-V-VI-Total-2004
		5,943,667	-1,166,330		1,309,524	1,081,637					153,738	153,738		13,412,110	8,857,500	dem-V-VI-Total-2005
		4,391,583	-1,087,018		1,439,672	1,375,993								10,825,051	8,001,842	dem-V-VI-Total-2006
		4,519,459	-1,028,754		1,429,933	1,269,331								10,557,222	8,352,002	dem-V-VI-Total-2007
		3,958,462	-759,419		1,199,812	1,071,205								9,661,831	8,464,117	dem-V-VI-Total-2008

Table 4.2.1.1.2 Effort (KWdays) by gear member state and vessel size group Western Waters Area V-VI

Area: V-VI, o10t15m vessel lengths

Gear	Year	NonDeepTotal		FRA		IRL		UK	
		Total	otal	Total	Excl. Deep	Total	Excl. Deep	Total	Excl. Deep
BEAM	2000	384	384					384	384
BEAM	2001								
BEAM	2002								
BEAM	2003	442	442					442	442
BEAM	2004								
BEAM	2005								
BEAM	2006								
BEAM	2007								
BEAM	2008								
OTTER	2000	1,771,689	1,771,689			78,826	78,826	1,692,863	1,692,863
OTTER	2001	1,755,038	1,755,038			77,538	77,538	1,677,500	1,677,500
OTTER	2002	1,671,110	1,670,886			48,849	48,849	1,622,261	1,622,037
OTTER	2003	1,977,338	1,977,338	3,490	3,490	78,118	78,118	1,895,730	1,895,730
OTTER	2004	1,922,830	1,915,836			61,406	61,406	1,861,424	1,854,430
OTTER	2005	1,764,666	1,764,666			31,586	31,586	1,733,080	1,733,080
OTTER	2006	1,762,492	1,762,492			18,871	18,871	1,743,621	1,743,621
OTTER	2007	1,820,995	1,820,995			13,643	13,643	1,807,352	1,807,352
OTTER	2008	1,661,075	1,661,075			16,584	16,584	1,644,491	1,644,491
DEM_SEINE	2000	23,337	23,337			23,337	23,337		
DEM_SEINE	2001	13,900	13,900			13,900	13,900		
DEM_SEINE	2002	13,385	13,385			13,385	13,385		
DEM_SEINE	2003	16,473	16,473			16,473	16,473		
DEM_SEINE	2004								
DEM_SEINE	2005								
DEM_SEINE	2006								
DEM_SEINE	2007								
DEM_SEINE	2008								
LONGLINE	2000	562	562					562	562
LONGLINE	2001								
LONGLINE	2002	2,016	2,016					2,016	2,016
LONGLINE	2003								
LONGLINE	2004								
LONGLINE	2005	1,574	1,574					1,574	1,574
LONGLINE	2006								
LONGLINE	2007								
LONGLINE	2008								
GILL	2000	11,167	11,167			1,740	1,740	9,427	9,427
GILL	2001	13,098	13,098					13,098	13,098
GILL	2002	7,562	7,562			1,740	1,740	5,822	5,822
GILL	2003	5,740	5,740			735	735	5,005	5,005
GILL	2004	1,957	1,957			1,711	1,711	246	246
GILL	2005	2,230	2,230			192	192	2,038	2,038
GILL	2006	3,423	3,423			2,379	2,379	1,044	1,044
GILL	2007	7,904	7,904			7,351	7,351	553	553
GILL	2008	16,002	16,002			6,945	6,945	9,057	9,057
TRAMMEL	2000	3,229	3,229	964	964			2,265	2,265
TRAMMEL	2001	1,416	1,416					1,416	1,416
TRAMMEL	2002								
TRAMMEL	2003	636	636					636	636
TRAMMEL	2004	435	435					435	435
TRAMMEL	2005								
TRAMMEL	2006	448	448			448	448		
TRAMMEL	2007								
TRAMMEL	2008								

Area: V-VI, o15m vessel lengths

Gear	Year	NonDeepTo	tal	BEL	Excl. Deep	DEN	Excl. Deep	GER	Excl. Deep	SPN	Excl. Deep	FRA	Excl. Deep	IRL	Excl. Deep	NED	Excl. Deep	POR	Excl. Deep	UK	Excl. Deep
		Total		Total		Total		Total		Total		Total		Total		Total		Total		Total	
BEAM	2000	253,832	242,554	27,240	27,240									10,523	10,523					216,069	204,791
BEAM	2001	111,810	102,512	10,308	10,308							1,227	1,227	12,528	12,528					87,747	78,449
BEAM	2002	116,878	112,664	5,595	5,595															111,283	107,069
BEAM	2003	191,727	115,414	19,005	19,005							23,548	-33,423							149,174	129,832
BEAM	2004	377,483	212,590	15,910	15,910							59,535	-55,091	38,963	38,963					263,075	212,808
BEAM	2005	159,622	130,147	8,027	8,027									5,068	5,068					146,527	117,052
BEAM	2006	111,730	98,775	3,700	3,700									6,335	6,335					101,695	88,740
BEAM	2007	3,535	3,535	1,732	1,732															1,803	1,803
BEAM	2008																				
OTTER	2000	27,408,162	11,856,342			64,965	64,965	277,311	277,311			8,559,986	-1,062,048	2,219,132	1,769,279					16,286,768	10,806,835
OTTER	2001	27,349,909	11,078,364			98,165	98,165	379,099	379,099			7,704,076	-1,178,205	2,179,978	1,656,028					16,988,591	10,123,277
OTTER	2002	24,742,672	9,691,909			130,437	130,437	177,135	177,135			7,440,645	-978,084	1,378,106	1,161,208	10,592	10,592			15,605,757	9,190,621
OTTER	2003	23,288,693	9,984,145			222,476	222,476	388,281	131,721			5,858,925	-1,265,937	1,946,540	1,656,512	9,840	9,840			14,862,631	9,229,533
OTTER	2004	20,328,589	8,296,558			91,088	91,088	220,955	33,435			5,413,233	-1,255,165	1,521,430	1,328,545					13,081,883	8,098,655
OTTER	2005	18,949,802	8,706,813			35,292	35,292	378,546	38,646	1,890,615	1,890,615	5,551,615	-881,967	1,255,516	1,028,829					9,838,218	6,595,398
OTTER	2006	15,724,561	8,329,877	989	989	11,520	11,520	275,757	26,697	1,960,738	1,960,738	4,035,272	-931,962	1,402,152	1,338,473					7,898,917	5,784,206
OTTER	2007	14,316,985	7,924,308	795	795			160,862	160,862	1,615,939	1,615,939	3,633,297	-1,082,328	1,390,557	1,241,655					7,515,535	5,987,385
OTTER	2008	13,026,788	7,917,388			103,067	103,067	10,341	3,060	1,256,252	1,256,252	3,193,455	-841,030	1,150,331	1,021,724					7,313,342	6,374,315
DEM_SEINE	2000	454,749	453,798											51,961	51,961					402,788	401,837
DEM_SEINE	2001	452,409	452,409											10,811	10,811					441,598	441,598
DEM_SEINE	2002	318,800	315,985											13,900	13,900					304,900	302,085
DEM_SEINE	2003	205,450	205,450											15,100	15,100					190,350	190,350
DEM_SEINE	2004	126,895	126,895											12,527	12,527					114,368	114,368
DEM_SEINE	2005	91,477	89,910											8,752	8,752					82,725	81,158
DEM_SEINE	2006	85,021	85,021					2,400	2,400					8,312	8,312					74,309	74,309
DEM_SEINE	2007	107,147	103,081											687	687					106,460	102,394
DEM_SEINE	2008	123,214	119,362											21,424	21,424					101,790	97,938
LONGLINE	2000	868,446	219,865									9,607	9,607	3,693						855,146	210,258
LONGLINE	2001	868,626	193,258											45,222						823,404	193,258
LONGLINE	2002	770,196	248,009											10,800	2,700					759,396	245,309
LONGLINE	2003	526,273	71,734											7,200						519,073	71,734
LONGLINE	2004	628,616	50,491											18,400	1,400					610,216	49,091
LONGLINE	2005	1,838,371	1,446,867							1,210,996	1,210,996			3,000	1,800					624,375	234,071
LONGLINE	2006	2,696,585	2,219,645							1,943,660	1,943,660	68,663	53,759							684,262	222,226
LONGLINE	2007	2,426,170	1,768,179							1,403,325	1,403,325	166,933	51,959	11,700						844,212	312,895
LONGLINE	2008	1,833,224	1,630,311							1,238,579	1,238,579	187,806	134,436							406,839	257,296
GILL	2000	2,538,431	368,332					265,418	265,418			248,373	-188,743	1,994	1,994			96,288	96,288	1,926,358	193,375
GILL	2001	2,376,282	232,236					90,861	90,861			295,292	-194,141	19,636	10,792			132,192	132,192	1,838,301	192,532
GILL	2002	2,095,341	-47,490					41,454	41,454			167,816	-339,066	6,518	6,518			142,528	142,528	1,737,025	101,076
GILL	2003	2,084,208	167,933					153,970	148,678			308,263	-116,829	19,232	19,232					1,602,743	116,852
GILL	2004	1,707,997	-32,469					140,225	73,377			60,605	-291,084	20,402	20,402			164,836	164,836	1,321,929	
GILL	2005	1,662,163	65,764					132,800	103,260			392,052	-284,363					153,738	153,738	983,573	93,129
GILL	2006	666,574	-78,588					56,548	41,356			287,648	-208,815	1,175	1,175					321,203	87,696
GILL	2007	1,209,076	349,775					161,064	161,064	41,481	41,481	719,229	1,615	5,995	5,995					281,307	139,620
GILL	2008	937,316	201,998					141,492	141,492	27,783	27,783	577,201	-52,825	4,528	4,528					186,312	81,020
TRAMMEL	2000																				
TRAMMEL	2001	23,552	23,552									23,552	23,552								
TRAMMEL	2002																				
TRAMMEL	2003	27,508	27,508																	27,508	27,508
TRAMMEL	2004																				
TRAMMEL	2005	5,410	5,410											5,410	5,410						
TRAMMEL	2006																				
TRAMMEL	2007																				
TRAMMEL	2008																				

Area: V-VI, All vessel lengths

			NonDeepTo	BEL		DEN		GER		SPN		FRA		IRL		NED		POR		UK	
Gear	Year	Total	tal	Total	Excl. Deep	Total	Excl. Deep	Total	Excl. Deep	Total	Excl. Deep	Total	Excl. Deep	Total	Excl. Deep	Total	Excl. Deep	Total	Excl. Deep	Total	Excl. Deep
BEAM	2000	254,216	242,938	27,240	27,240									10,523	10,523					216,453	205,175
BEAM	2001	111,810	102,512	10,308	10,308							1,227	1,227	12,528	12,528					87,747	78,449
BEAM	2002	116,878	112,664	5,595	5,595															111,283	107,069
BEAM	2003	192,169	115,856	19,005	19,005							23,548	-33,423							149,616	130,274
BEAM	2004	377,483	212,590	15,910	15,910							59,535	-55,091	38,963	38,963					263,075	212,808
BEAM	2005	159,622	130,147	8,027	8,027									5,068	5,068					146,527	117,052
BEAM	2006	111,730	98,775	3,700	3,700									6,335	6,335					101,695	88,740
BEAM	2007	3,535	3,535	1,732	1,732															1,803	1,803
BEAM	2008																				
OTTER	2000	29,179,851	13,628,031			64,965	64,965	277,311	277,311			8,559,986	-1,062,048	2,297,958	1,848,105					17,979,631	12,499,698
OTTER	2001	29,104,947	12,833,402			98,165	98,165	379,099	379,099			7,704,076	-1,178,205	2,257,516	1,733,566					18,666,091	11,800,777
OTTER	2002	26,413,782	11,362,795			130,437	130,437	177,135	177,135			7,440,645	-978,084	1,426,955	1,210,057	10,592	10,592			17,228,018	10,812,658
OTTER	2003	25,266,031	11,961,483			222,476	222,476	388,281	131,721			5,862,415	-1,262,447	2,024,658	1,734,630	9,840	9,840			16,758,361	11,125,263
OTTER	2004	22,251,419	10,212,394			91,088	91,088	220,955	33,435			5,413,233	-1,255,165	1,582,836	1,389,951					14,943,307	9,953,085
OTTER	2005	20,714,468	10,471,479			35,292	35,292	378,546	38,646	1,890,615	1,890,615	5,551,615	-881,967	1,287,102	1,060,415					11,571,298	8,328,478
OTTER	2006	17,487,053	10,092,369	989	989	11,520	11,520	275,757	26,697	1,960,738	1,960,738	4,035,272	-931,962	1,421,023	1,357,344					9,642,538	7,527,827
OTTER	2007	16,137,980	9,745,303	795	795			160,862	160,862	1,615,939	1,615,939	3,633,297	-1,082,328	1,404,200	1,255,298					9,322,887	7,794,737
OTTER	2008	14,687,863	9,578,463			103,067	103,067	10,341	3,060	1,256,252	1,256,252	3,193,455	-841,030	1,166,915	1,038,308					8,957,833	8,018,806
DEM_SEINE	2000	478,086	477,135											75,298	75,298					402,788	401,837
DEM_SEINE	2001	466,309	466,309											24,711	24,711					441,598	441,598
DEM_SEINE	2002	332,185	329,370											27,285	27,285					304,900	302,085
DEM_SEINE	2003	221,923	221,923											31,573	31,573					190,350	190,350
DEM_SEINE	2004	126,895	126,895											12,527	12,527					114,368	114,368
DEM_SEINE	2005	91,477	89,910											8,752	8,752					82,725	81,158
DEM_SEINE	2006	85,021	85,021					2,400	2,400					8,312	8,312					74,309	74,309
DEM_SEINE	2007	107,147	103,081											687	687					106,460	102,394
DEM_SEINE	2008	123,214	119,362											21,424	21,424					101,790	97,938
LONGLINE	2000	869,008	220,427									9,607	9,607	3,693						855,708	210,820
LONGLINE	2001	868,626	193,258											45,222						823,404	193,258
LONGLINE	2002	772,212	250,025											10,800	2,700					761,412	247,325
LONGLINE	2003	526,273	71,734											7,200						519,073	71,734
LONGLINE	2004	628,616	50,491											18,400	1,400					610,216	49,091
LONGLINE	2005	1,839,945	1,448,441							1,210,996	1,210,996			3,000	1,800					625,949	235,645
LONGLINE	2006	2,696,585	2,219,645							1,943,660	1,943,660	68,663	53,759							684,262	222,226
LONGLINE	2007	2,426,170	1,768,179							1,403,325	1,403,325	166,933	51,959	11,700						844,212	312,895
LONGLINE	2008	1,833,224	1,630,311							1,238,579	1,238,579	187,806	134,436							406,839	257,296
GILL	2000	2,549,598	379,499					265,418	265,418			248,373	-188,743	3,734	3,734			96,288	96,288	1,935,785	202,802
GILL	2001	2,389,380	245,334					90,861	90,861			295,292	-194,141	19,636	10,792			132,192	132,192	1,851,399	205,630
GILL	2002	2,102,903	-39,928					41,454	41,454			167,816	-339,066	8,258	8,258			142,528	142,528	1,742,847	106,898
GILL	2003	2,089,948	173,673					153,970	148,678			308,263	-116,829	19,967	19,967					1,607,748	121,857
GILL	2004	1,709,954	-30,512					140,225	73,377			60,605	-291,084	22,113	22,113			164,836	164,836	1,322,175	246
GILL	2005	1,664,393	67,994					132,800	103,260			392,052	-284,363	192	192			153,738	153,738	985,611	95,167
GILL	2006	669,997	-75,165					56,548	41,356			287,648	-208,815	3,554	3,554					322,247	88,740
GILL	2007	1,216,980	357,679					161,064	161,064	41,481	41,481	719,229	1,615	13,346	13,346					281,860	140,173
GILL	2008	953,318	218,000					141,492	141,492	27,783	27,783	577,201	-52,825	11,473	11,473					195,369	90,077
TRAMMEL	2000	3,229	3,229									964	964							2,265	2,265
TRAMMEL	2001	24,968	24,968									23,552	23,552							1,416	1,416
TRAMMEL	2002																				
TRAMMEL	2003	28,144	28,144																	28,144	28,144
TRAMMEL	2004	435	435																	435	435
TRAMMEL	2005	5,410	5,410											5,410	5,410						
TRAMMEL	2006	448	448											448	448						
TRAMMEL	2007																				
TRAMMEL	2008																				

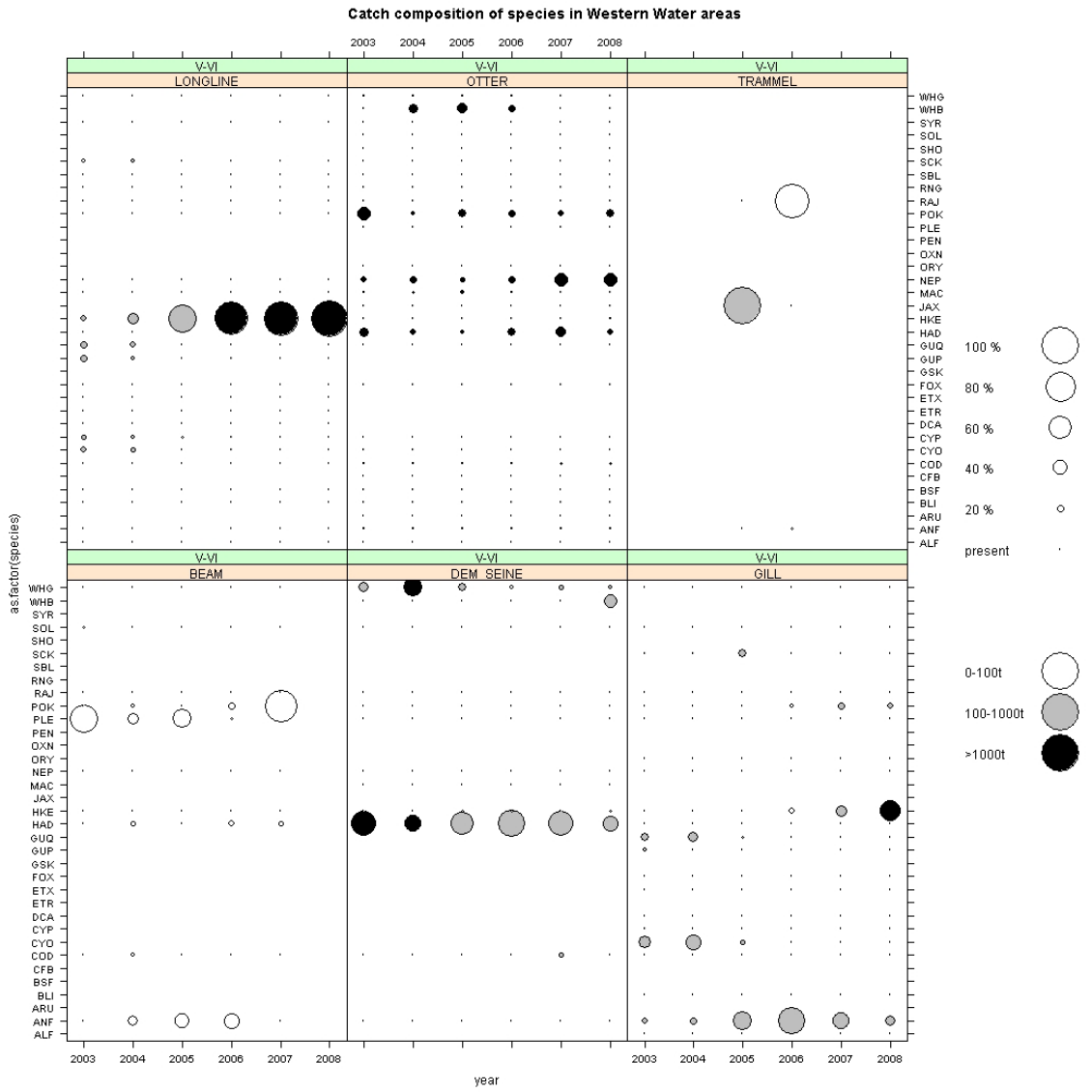

Figure 4.2.1.1.1 Catch composition by gear (countries combined) Western waters area V-VI. Size of circles represents relative contribution to catch, shading indicates quantity.

4.2.1.2. Western Waters Area VII

Effort

Most of the effort in this area is by vessels over 15m (Table 4.2.1.2.1 and Table 4.2.1.2.2). Belgium, Ireland, France and UK recorded effort for the smaller category (over 10m <15m) a high proportion of this was by trawling. Belgium, France, Ireland and UK contributed most effort in the over 15m vessel sizes. Spain also recorded effort but this appears to be incomplete. Only UK showed a noticeable trend (downward) in effort over the time period. In other countries the effort was fairly stable. Overall effort figures are unreliable.

Table 4.2.1.2.2 shows the effort broken down by gear type. Beam trawling was predominately carried out by Belgium. France, Ireland and the UK carried out significant otter trawling while gill netting activity has increased by French vessels but decreased amongst Irish ones.

Catch composition

Figure 4.2.1.2.1 shows the species composition taken by different gears. Otter trawling took a wide variety of species but as in area VI this arises from a variety of trawl fisheries and catches in each of these are more specific that the figure implies. Nephrops represented the biggest proportion and this has increased in recent years. Gill netting and longlining were dominated by hake catches. Anglerfish were important in trammel and gill nets in this area. Beam trawl catches exhibited high proportions of sole and plaice (and also some anglerfish) while the demersal seines were more specific for whiting and haddock.

Table 4.2.1.2.1 Effort (KWdays) by member state and vessel size group Western Waters Area VII

Area: VII, dem effort

				BEL 7,396,910			DEN			GER 233,560			SPN 17,957,785		
Length	Year	Total	NonDeepTotal	Reported	Total	Excl. Deep	Reported	Total	Excl. Deep	Reported	Total	Excl. Deep	Reported	Total	Excl. Deep
o10t15m	2000	5,551,383	5,387,008		18,754	18,754									
o10t15m	2001	5,993,618	5,818,152		17,612	17,612									
o10t15m	2002	6,457,147	6,300,067		13,958	13,958									
o10t15m	2003	7,549,659	7,395,601		10,983	10,983									
o10t15m	2004	7,979,463	7,821,592		4,916	4,916									
o10t15m	2005	7,756,980	7,603,136		119	119									
o10t15m	2006	5,788,801	5,671,464												
o10t15m	2007	5,917,108	5,813,184												
o10t15m	2008	7,109,119	7,015,884		3,476	3,476									
o15m	2000	80,655,835	66,571,051		5,254,643	5,254,643		190,022	190,022		417,895	417,895			
o15m	2001	87,968,493	73,556,143		6,137,908	6,137,908		171,401	171,401		391,578	391,578			
o15m	2002	97,088,669	83,589,256		6,923,028	6,923,028		71,403	71,403		377,303	377,303			
o15m	2003	96,990,321	84,492,080		7,412,454	7,412,454		129,218	129,218		371,138	259,203			
o15m	2004	91,237,219	80,158,067	7,366,910	7,694,505	7,694,505		233,528	233,528		452,381	267,295	14,464,996		
o15m	2005	110,200,983	99,248,878	6,836,154	7,175,508	7,175,508		75,248	75,248	201,473	396,914	207,777	14,562,329	18,293,310	18,293,310
o15m	2006	97,094,501	88,904,979	6,628,781	6,987,002	6,987,002		120,115	120,115	16,774	32,794	32,794	15,695,138	14,987,369	14,987,369
o15m	2007	94,861,359	86,852,638	7,059,791	7,388,600	7,388,600		73,624	73,624	98,222	171,880	163,482	15,480,104	16,151,384	16,151,384
o15m	2008	79,135,921	72,932,915	5,356,221	5,608,360	5,608,360		54,619	54,619	154,707	229,650	229,650	15,136,898	15,007,065	15,007,065
Total	2000	86,207,218	71,958,059		5,273,397	5,273,397		190,022	190,022		417,895	417,895			
Total	2001	93,962,111	79,374,295		6,155,520	6,155,520		171,401	171,401		391,578	391,578			
Total	2002	103,545,816	89,889,323		6,936,986	6,936,986		71,403	71,403		377,303	377,303			
Total	2003	104,539,980	91,887,681		7,423,437	7,423,437		129,218	129,218		371,138	259,203			
Total	2004	99,216,682	87,979,659		7,699,421	7,699,421		233,528	233,528		452,381	267,295			
Total	2005	117,957,963	106,852,014		7,175,627	7,175,627		75,248	75,248		396,914	207,777		18,293,310	18,293,310
Total	2006	102,883,302	94,576,443		6,987,002	6,987,002		120,115	120,115		32,794	32,794		14,987,369	14,987,369
Total	2007	100,778,467	92,665,822		7,388,600	7,388,600		73,624	73,624		171,880	163,482		16,151,384	16,151,384
Total	2008	86,245,040	79,948,799		5,611,836	5,611,836		54,619	54,619		229,650	229,650		15,007,065	15,007,065

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CONT.	FRA 40,657,844			IRL 7,904,120			NED 350,279			POR			UK 25,786,266			gsa
	Reported	Total	Excl. Deep	Reported	Total	Excl. Deep	Reported	Total	Excl. Deep	Reported	Total	Excl. Deep	Reported	Total	Excl. Deep	dem-VII--
		1,973,051	1,971,558		377,433	377,433								3,182,145	3,019,263	dem-VII-o10t15m-2000
		2,363,004	2,362,602		380,186	380,186								3,232,816	3,057,752	dem-VII-o10t15m-2001
		3,160,377	3,160,377		367,764	367,764								2,915,048	2,757,968	dem-VII-o10t15m-2002
		3,981,762	3,981,762		477,747	477,747								3,079,167	2,925,109	dem-VII-o10t15m-2003
		4,411,315	4,411,315		453,371	453,371								3,109,861	2,951,990	dem-VII-o10t15m-2004
		4,311,862	4,311,862		462,155	462,155								2,982,844	2,829,000	dem-VII-o10t15m-2005
		2,373,753	2,373,687		542,680	542,680		161	161					2,872,207	2,754,936	dem-VII-o10t15m-2006
		2,297,477	2,297,477		692,534	692,534								2,927,097	2,823,173	dem-VII-o10t15m-2007
		3,524,725	3,523,751		672,432	672,432								2,908,486	2,816,225	dem-VII-o10t15m-2008
		37,279,468	34,579,170		14,035,639	12,506,599		512,127	512,127					22,966,041	13,110,595	dem-VII-o15m-2000
		44,129,514	41,008,222		14,934,657	12,193,172		471,401	471,401					21,732,034	13,182,461	dem-VII-o15m-2001
		54,407,859	52,002,758		15,329,562	12,589,455		395,245	395,245					19,584,269	11,230,064	dem-VII-o15m-2002
		50,570,534	48,554,279		17,905,511	14,806,598		471,394	471,394		231	231		20,129,841	12,858,703	dem-VII-o15m-2003
		47,331,321	45,708,745		16,585,469	14,258,726	223,582	393,026	393,026				17,007,055	18,546,989	11,602,242	dem-VII-o15m-2004
	9,624,272	50,024,058	47,619,951	6,567,847	16,574,464	14,416,677	259,469	459,264	459,264				6,332,921	17,202,217	11,001,143	dem-VII-o15m-2005
	1,497,884	45,918,379	43,594,820	6,371,584	13,646,709	12,518,426	275,943	455,013	455,013				11,671,487	14,947,120	10,209,440	dem-VII-o15m-2006
	8,619,032	42,153,278	40,098,999	5,113,026	13,962,821	13,187,531	434,615	548,690	548,690		6,531	6,531	8,147,020	14,404,551	9,233,797	dem-VII-o15m-2007
	7,961,766	32,757,799	31,394,847	3,911,492	11,091,682	10,508,949	573,459	716,937	716,937				10,785,463	13,669,809	9,412,488	dem-VII-o15m-2008
		39,252,519	36,550,728		14,413,072	12,884,032		512,127	512,127					26,148,186	16,129,858	dem-VII-Total-2000
		46,492,518	43,370,824		15,314,843	12,573,358		471,401	471,401					24,964,850	16,240,213	dem-VII-Total-2001
		57,568,236	55,163,135		15,697,326	12,957,219		395,245	395,245					22,499,317	13,988,032	dem-VII-Total-2002
		54,552,296	52,536,041		18,383,258	15,284,345		471,394	471,394		231	231		23,209,008	15,783,812	dem-VII-Total-2003
		51,742,636	50,120,060		17,038,840	14,712,097		393,026	393,026					21,656,850	14,554,232	dem-VII-Total-2004
		54,335,920	51,931,813		17,036,619	14,878,832		459,264	459,264					20,185,061	13,830,143	dem-VII-Total-2005
		48,292,132	45,968,507		14,189,389	13,061,106		455,174	455,174					17,819,327	12,964,376	dem-VII-Total-2006
		44,450,755	42,396,476		14,655,355	13,880,065		548,690	548,690		6,531	6,531		17,331,648	12,056,970	dem-VII-Total-2007
		36,282,524	34,918,598		11,764,114	11,181,381		716,937	716,937					16,578,295	12,228,713	dem-VII-Total-2008

Table 4.2.1.2.2 Effort (KWdays) by gear, member state and vessel size group Western Waters Area VII

Area: VII, o10t15m vessel lengths

Gear	Year	Total	NonDeepTotal	BEL Total	BEL Excl. Deep	FRA Total	FRA Excl. Deep	IRL Total	IRL Excl. Deep	NED Total	NED Excl. Deep	UK Total	UK Excl. Deep
BEAM	2000	417,009	417,009	12,013	12,013	226,491	226,491	1,320	1,320			177,185	177,185
BEAM	2001	675,249	674,405	15,994	15,994	303,012	302,610					356,243	355,801
BEAM	2002	827,081	827,081	13,958	13,958	421,820	421,820					391,303	391,303
BEAM	2003	788,056	788,056	9,186	9,186	399,121	399,121					379,749	379,749
BEAM	2004	465,205	465,205	4,563	4,563	238,247	238,247					222,395	222,395
BEAM	2005	489,379	489,379			268,404	268,404					220,975	220,975
BEAM	2006	470,289	470,289			252,472	252,472					217,817	217,817
BEAM	2007	524,473	524,473			300,668	300,668	748	748			223,057	223,057
BEAM	2008	542,623	542,623			262,575	262,575					280,048	280,048
OTTER	2000	3,689,742	3,681,421	1,419	1,419	892,521	891,028	292,457	292,457			2,503,345	2,496,517
OTTER	2001	3,901,092	3,895,624	1,618	1,618	1,214,712	1,214,712	314,716	314,716			2,370,046	2,364,578
OTTER	2002	4,309,907	4,299,434			1,949,620	1,949,620	309,624	309,624			2,050,663	2,040,190
OTTER	2003	5,193,592	5,186,684	422	422	2,623,347	2,623,347	381,857	381,857			2,187,966	2,181,058
OTTER	2004	5,806,838	5,801,705			3,073,107	3,073,107	366,701	366,701			2,367,030	2,361,897
OTTER	2005	5,547,599	5,541,973	119	119	2,847,391	2,847,391	380,885	380,885			2,319,204	2,313,578
OTTER	2006	4,134,678	4,124,844			1,470,084	1,470,018	445,716	445,716			2,218,878	2,209,110
OTTER	2007	4,384,475	4,366,035			1,521,087	1,521,087	574,136	574,136			2,289,252	2,270,812
OTTER	2008	5,080,997	5,070,896			2,298,302	2,298,302	528,789	528,789			2,253,906	2,243,805
DEM_SEINE	2000	515	515					515	515				
DEM_SEINE	2001	1,888	1,888					1,888	1,888				
DEM_SEINE	2002	1,888	1,888					1,888	1,888				
DEM_SEINE	2003	17,771	17,771					17,683	17,683			88	88
DEM_SEINE	2004	804	804					804	804				
DEM_SEINE	2005												
DEM_SEINE	2006	142	142									142	142
DEM_SEINE	2007												
DEM_SEINE	2008												
LONGLINE	2000	187,933	170,436			11,016	11,016					176,917	159,420
LONGLINE	2001	156,028	144,449			12,369	12,369					143,659	132,080
LONGLINE	2002	183,564	181,088			64,480	64,480					119,084	116,608
LONGLINE	2003	202,681	202,043			76,358	76,358					126,323	125,685
LONGLINE	2004	158,680	157,366			61,770	61,770					96,910	95,596
LONGLINE	2005	187,765	186,604			85,142	85,142	4,074	4,074			98,549	97,388
LONGLINE	2006	144,845	143,739			32,560	32,560	605	605			111,680	110,574
LONGLINE	2007	143,486	142,960			15,956	15,956	8,642	8,642			118,888	118,362
LONGLINE	2008	167,493	165,835			52,865	51,891	14,515	14,515			100,113	99,429
GILL	2000	633,144	497,526	5,322	5,322	228,412	228,412	83,141	83,141			316,269	180,651
GILL	2001	742,573	585,162			320,762	320,762	63,582	63,582			358,229	200,818
GILL	2002	804,734	660,603			396,881	396,881	56,252	56,252			351,601	207,470
GILL	2003	1,006,514	860,002	1,375	1,375	551,118	551,118	77,405	77,405			376,616	230,104
GILL	2004	1,068,100	916,676	353	353	562,170	562,170	85,866	85,866			419,711	268,287
GILL	2005	922,748	781,397			516,124	516,124	77,196	77,196			329,428	188,077
GILL	2006	678,117	574,987			272,456	272,456	91,622	91,622	161	161	313,878	210,748
GILL	2007	546,381	469,932			163,920	163,920	103,537	103,537			278,924	202,475
GILL	2008	698,420	619,779	3,476	3,476	325,871	325,871	118,621	118,621			250,452	171,811
TRAMMEL	2000	623,040	620,101			614,611	614,611					8,429	5,490
TRAMMEL	2001	516,788	516,624			512,149	512,149					4,639	4,475
TRAMMEL	2002	329,973	329,973			327,576	327,576					2,397	2,397
TRAMMEL	2003	341,045	341,045			331,818	331,818	802	802			8,425	8,425
TRAMMEL	2004	479,836	479,836			476,021	476,021					3,815	3,815
TRAMMEL	2005	609,489	603,783			594,801	594,801					14,688	8,982
TRAMMEL	2006	360,730	357,463			346,181	346,181	4,737	4,737			9,812	6,545
TRAMMEL	2007	318,293	309,784			295,846	295,846	5,471	5,471			16,976	8,467
TRAMMEL	2008	619,586	616,751			585,112	585,112	10,507	10,507			23,967	21,132

Area: VII, o15m vessel lengths

Gear	Year	Total	NonDeepTotal	BEL Total	BEL Excl. Deep	DEN Total	DEN Excl. Deep	GER Total	GER Excl. Deep	SPN Total	SPN Excl. Deep	FRA Total	FRA Excl. Deep	IRL Total	IRL Excl. Deep	NED Total	NED Excl. Deep	POR Total	POR Excl. Deep	UK Total	UK Excl. Deep
BEAM	2000	15,904,196	14,163,179	5,191,676	5,191,676							236,801	236,801	4,016,703	4,016,703	234,717	234,717			6,224,299	4,483,282
BEAM	2001	16,915,877	14,992,697	6,068,250	6,068,250							433,444	433,444	3,710,536	3,651,454	4,756	4,756			6,698,891	4,834,793
BEAM	2002	17,129,311	15,062,797	6,873,091	6,873,091							407,058	407,058	3,625,994	3,620,622	11,463	11,463			6,211,705	4,150,563
BEAM	2003	19,485,426	17,663,080	7,373,351	7,373,351							386,327	386,327	4,701,800	4,701,800	22,000	22,000			7,001,948	5,179,602
BEAM	2004	18,329,932	16,659,873	7,536,835	7,536,835							542,852	542,852	3,551,216	3,551,216	5,147	5,147			6,693,882	5,023,823
BEAM	2005	17,236,028	15,565,884	6,942,113	6,942,113							527,125	527,125	3,459,895	3,442,388	5,884	5,884			6,301,011	4,648,374
BEAM	2006	15,091,617	14,179,413	6,537,260	6,537,260							494,140	494,140	2,555,374	2,555,374	4,796	4,796			5,500,047	4,587,843
BEAM	2007	14,757,910	13,766,062	6,861,441	6,861,441							404,557	404,557	2,315,734	2,315,734					5,176,178	4,184,330
BEAM	2008	11,312,540	10,517,385	5,091,774	5,091,774							390,933	390,933	1,381,516	1,381,516					4,448,317	3,653,162
OTTER	2000	58,255,962	48,477,486	62,967	62,967	190,022	190,022					36,178,425	33,748,490	7,878,034	6,551,721	240,846	240,846			13,705,668	7,683,440
OTTER	2001	64,182,173	54,053,997	56,359	56,359	171,401	171,401					42,127,239	39,490,786	9,097,354	6,629,283	307,282	307,282			12,422,538	7,398,886
OTTER	2002	72,779,412	64,270,960	43,888	43,888	64,410	64,410					51,942,602	50,254,384	9,747,422	7,210,436	267,116	267,116			10,713,974	6,430,726
OTTER	2003	70,034,460	62,374,523	23,871	23,871	129,218	129,218					48,302,940	46,694,522	11,038,424	8,166,638	318,855	318,855			10,221,152	7,041,419
OTTER	2004	65,518,498	59,089,615	140,450	140,450	233,528	233,528					44,865,183	43,578,098	11,202,261	8,897,434	150,444	150,444			8,926,632	6,089,661
OTTER	2005	77,873,980	71,224,185	215,598	215,598	75,248	75,248			10,161,788	10,161,788	47,118,800	45,295,345	11,515,048	9,405,593	153,128	153,128			8,634,370	5,917,485
OTTER	2006	69,415,129	63,977,240	427,286	427,286	120,115	120,115			8,418,747	8,418,747	42,787,498	41,087,982	9,907,905	8,810,597	120,784	120,784			7,632,794	4,991,729
OTTER	2007	65,567,448	60,428,102	500,630	500,630	73,624	73,624			8,298,976	8,298,976	38,942,505	37,434,185	10,468,748	9,720,838	94,339	94,339			7,188,626	4,305,510
OTTER	2008	54,498,888	50,842,943	494,137	494,137	54,619	54,619			7,715,818	7,715,818	30,395,753	29,350,244	8,671,625	8,093,317	102,113	102,113			7,064,823	5,032,695
DEM_SEINE	2000	822,828	764,847											517,793	517,793	36,564	36,564			268,471	210,490
DEM_SEINE	2001	997,221	997,221											693,648	693,648	158,703	158,703			144,870	144,870
DEM_SEINE	2002	1,315,900	1,315,900											1,108,330	1,108,330	116,666	116,666			90,904	90,904
DEM_SEINE	2003	1,362,036	1,361,383											1,077,780	1,077,780	130,539	130,539			153,717	153,064
DEM_SEINE	2004	1,325,892	1,321,769											1,005,468	1,005,468	237,435	237,435			82,989	78,866
DEM_SEINE	2005	1,233,285	1,229,814											900,551	900,551	300,252	300,252			32,482	29,011
DEM_SEINE	2006	1,214,878	1,214,878											705,624	705,624	328,991	328,991			180,263	180,263
DEM_SEINE	2007	1,379,570	1,348,061											649,576	649,576	454,351	454,351			275,643	244,134
DEM_SEINE	2008	1,499,304	1,376,429											537,909	537,909	614,824	614,824			346,571	223,696
LONGLINE	2000	866,520	417,491									59,127	32,533	77,156	33,509					730,237	351,449
LONGLINE	2001	1,030,657	526,458									86,180	82,326	134,643	65,296					809,834	378,836
LONGLINE	2002	913,213	303,013			6,993	6,993					46,153	46,153	69,300	3,600					790,767	246,267
LONGLINE	2003	643,518	111,138									57,801	57,801	83,386	9,586					502,331	43,751
LONGLINE	2004	383,123	65,809									38,423	28,214	4,400	1,400					340,300	36,195
LONGLINE	2005	8,223,046	7,851,465							7,732,647	7,732,647	11,685	9,985	68,722	49,772					409,992	59,061
LONGLINE	2006	7,120,190	6,421,969							6,266,532	6,266,532	139,777	55,506	660	660					713,221	99,271
LONGLINE	2007	8,807,444	7,857,862							7,561,387	7,561,387	375,382	119,017	18,092	15,492			6,531	6,531	846,052	155,435
LONGLINE	2008	8,327,291	7,492,090							7,131,979	7,131,979	235,962	146,920	8,381	8,381					950,969	204,810
GILL	2000	4,563,827	2,555,259					417,895	417,895			639,407	395,638	1,545,953	1,386,873					1,960,572	354,853
GILL	2001	4,461,648	2,654,764	13,299	13,299			391,578	391,578			1,211,705	730,720	1,294,591	1,149,606	660	660			1,549,815	368,901
GILL	2002	4,558,484	2,340,914	6,049	6,049			377,303	377,303			1,732,637	1,015,754	778,516	646,467					1,663,979	295,341
GILL	2003	5,191,455	2,745,279	15,232	15,232			371,138	259,203			1,618,675	1,210,838	1,004,121	850,794					2,182,289	409,212
GILL	2004	5,286,091	2,643,502	17,220	17,220			452,381	267,295			1,545,359	1,220,077	821,952	803,036					2,449,179	335,874
GILL	2005	5,234,291	2,992,645	17,797	17,797			396,914	207,777	398,875	398,875	1,998,544	1,422,230	613,988	602,113					1,808,173	343,853
GILL	2006	3,852,307	2,764,752	22,456	22,456			32,794	32,794	302,090	302,090	2,173,941	1,637,701	463,596	432,621	442	442			856,988	336,648
GILL	2007	3,939,260	3,055,285	879	879			171,880	163,482	291,021	291,021	2,082,128	1,792,534	492,167	467,387					901,185	339,982
GILL	2008	3,052,706	2,259,828	7,508	7,508			229,650	229,650	159,268	159,268	1,360,530	1,132,129	457,366	452,941					838,384	278,332
TRAMMEL	2000	242,502	192,789									165,708	165,708							76,794	27,081
TRAMMEL	2001	380,917	331,006									270,946	270,946	3,885	3,885					106,086	56,175
TRAMMEL	2002	392,349	295,672									279,409	279,409							112,940	16,263
TRAMMEL	2003	273,426	236,677									204,791	204,791					231	231	68,404	31,655
TRAMMEL	2004	393,683	377,499									339,504	339,504	172	172					54,007	37,823
TRAMMEL	2005	400,353	384,885									367,904	365,266	16,260	16,260					16,189	3,359
TRAMMEL	2006	400,380	346,727									323,023	319,491	13,550	13,550					63,807	13,686
TRAMMEL	2007	409,727	397,266	25,650	25,650							348,706	348,706	18,504	18,504					16,867	4,406
TRAMMEL	2008	445,192	444,240	14,941	14,941							374,621	374,621	34,885	34,885					20,745	19,793

Area: VII, All vessel lengths

			NonDeepTo	BEL		DEN		GER		SPN		FRA		IRL		NED		POR		UK	
Gear	Year	Total	tal	Total	Excl. Deep	Total	Excl. Deep	Total	Excl. Deep	Total	Excl. Deep	Total	Excl. Deep	Total	Excl. Deep	Total	Excl. Deep	Total	Excl. Deep	Total	Excl. Deep
BEAM	2000	16,321,205	14,580,188	5,203,689	5,203,689							463,292	463,292	4,018,023	4,018,023	234,717	234,717			6,401,484	4,660,467
BEAM	2001	17,591,126	15,667,102	6,084,244	6,084,244							736,456	736,054	3,710,536	3,651,454	4,756	4,756			7,055,134	5,190,594
BEAM	2002	17,956,392	15,889,878	6,887,049	6,887,049							828,878	828,878	3,625,994	3,620,622	11,463	11,463			6,603,008	4,541,866
BEAM	2003	20,273,482	18,451,136	7,382,537	7,382,537							785,448	785,448	4,701,800	4,701,800	22,000	22,000			7,381,697	5,559,351
BEAM	2004	18,795,137	17,125,078	7,541,398	7,541,398							781,099	781,099	3,551,216	3,551,216	5,147	5,147			6,916,277	5,246,218
BEAM	2005	17,725,407	16,055,263	6,942,113	6,942,113							795,529	795,529	3,459,895	3,442,388	5,884	5,884			6,521,986	4,869,349
BEAM	2006	15,561,906	14,649,702	6,537,260	6,537,260							746,612	746,612	2,555,374	2,555,374	4,796	4,796			5,717,864	4,805,660
BEAM	2007	15,282,383	14,290,535	6,861,441	6,861,441							705,225	705,225	2,316,482	2,316,482					5,399,235	4,407,387
BEAM	2008	11,855,163	11,060,008	5,091,774	5,091,774							653,508	653,508	1,381,516	1,381,516					4,728,365	3,933,210
OTTER	2000	61,945,704	52,158,907	64,386	64,386	190,022	190,022					37,070,946	34,639,518	8,170,491	6,844,178	240,846	240,846			16,209,013	10,179,957
OTTER	2001	68,083,265	57,949,621	57,977	57,977	171,401	171,401					43,341,951	40,705,498	9,412,070	6,943,999	307,282	307,282			14,792,584	9,763,464
OTTER	2002	77,089,319	68,570,394	43,888	43,888	64,410	64,410					53,892,222	52,204,004	10,057,046	7,520,060	267,116	267,116			12,764,637	8,470,916
OTTER	2003	75,228,052	67,561,207	24,293	24,293	129,218	129,218					50,926,287	49,317,869	11,420,281	8,548,495	318,855	318,855			12,409,118	9,222,477
OTTER	2004	71,325,336	64,891,320	140,450	140,450	233,528	233,528					47,938,290	46,651,205	11,568,962	9,264,135	150,444	150,444			11,293,662	8,451,558
OTTER	2005	83,421,579	76,766,158	215,717	215,717	75,248	75,248			10,161,788	10,161,788	49,966,191	48,142,736	11,895,933	9,786,478	153,128	153,128			10,953,574	8,231,063
OTTER	2006	73,549,807	68,102,084	427,286	427,286	120,115	120,115			8,418,747	8,418,747	44,257,582	42,558,000	10,353,621	9,256,313	120,784	120,784			9,851,672	7,200,839
OTTER	2007	69,951,923	64,794,137	500,630	500,630	73,624	73,624			8,298,976	8,298,976	40,463,592	38,955,272	11,042,884	10,294,974	94,339	94,339			9,477,878	6,576,322
OTTER	2008	59,579,885	55,913,839	494,137	494,137	54,619	54,619			7,715,818	7,715,818	32,694,055	31,648,546	9,200,414	8,622,106	102,113	102,113			9,318,729	7,276,500
DEM_SEINE	2000	823,343	765,362											518,308	518,308	36,564	36,564			268,471	210,490
DEM_SEINE	2001	999,109	999,109											695,536	695,536	158,703	158,703			144,870	144,870
DEM_SEINE	2002	1,317,788	1,317,788											1,110,218	1,110,218	116,666	116,666			90,904	90,904
DEM_SEINE	2003	1,379,807	1,379,154											1,095,463	1,095,463	130,539	130,539			153,805	153,152
DEM_SEINE	2004	1,326,696	1,322,573											1,006,272	1,006,272	237,435	237,435			82,989	78,866
DEM_SEINE	2005	1,233,285	1,229,814											900,551	900,551	300,252	300,252			32,482	29,011
DEM_SEINE	2006	1,215,020	1,215,020											705,624	705,624	328,991	328,991			180,405	180,405
DEM_SEINE	2007	1,379,570	1,348,061											649,576	649,576	454,351	454,351			275,643	244,134
DEM_SEINE	2008	1,499,304	1,376,429											537,909	537,909	614,824	614,824			346,571	223,696
LONGLINE	2000	1,054,453	587,927									70,143	43,549	77,156	33,509					907,154	510,869
LONGLINE	2001	1,186,685	670,907									98,549	94,695	134,643	65,296					953,493	510,916
LONGLINE	2002	1,096,777	484,101			6,993	6,993					110,633	110,633	69,300	3,600					909,851	362,875
LONGLINE	2003	846,199	313,181									134,159	134,159	83,386	9,586					628,654	169,436
LONGLINE	2004	541,803	223,175									100,193	89,984	4,400	1,400					437,210	131,791
LONGLINE	2005	8,410,811	8,038,069							7,732,647	7,732,647	96,827	95,127	72,796	53,846					508,541	156,449
LONGLINE	2006	7,265,035	6,565,708							6,266,532	6,266,532	172,337	88,066	1,265	1,265					824,901	209,845
LONGLINE	2007	8,950,930	8,000,822							7,561,387	7,561,387	391,338	134,973	26,734	24,134			6,531	6,531	964,940	273,797
LONGLINE	2008	8,494,784	7,657,925							7,131,979	7,131,979	288,827	198,811	22,896	22,896					1,051,082	304,239
GILL	2000	5,196,971	3,052,785	5,322	5,322			417,895	417,895			867,819	624,050	1,629,094	1,470,014					2,276,841	535,504
GILL	2001	5,204,221	3,239,926	13,299	13,299			391,578	391,578			1,532,467	1,051,482	1,358,173	1,213,188	660	660			1,908,044	569,719
GILL	2002	5,363,218	3,001,517	6,049	6,049			377,303	377,303			2,129,518	1,412,635	834,768	702,719					2,015,580	502,811
GILL	2003	6,197,969	3,605,281	16,607	16,607			371,138	259,203			2,169,793	1,761,956	1,081,526	928,199					2,558,905	639,316
GILL	2004	6,354,191	3,560,178	17,573	17,573			452,381	267,295			2,107,529	1,782,247	907,618	888,902					2,868,890	604,161
GILL	2005	6,157,039	3,774,042	17,797	17,797			396,914	207,777	398,875	398,875	2,514,668	1,938,354	691,184	679,309					2,137,601	531,930
GILL	2006	4,530,424	3,339,739	22,456	22,456			32,794	32,794	302,090	302,090	2,446,397	1,910,157	555,218	524,243	603	603			1,170,866	547,396
GILL	2007	4,485,641	3,525,217	879	879			171,880	163,482	291,021	291,021	2,246,048	1,956,454	595,704	570,924					1,180,109	542,457
GILL	2008	3,751,126	2,879,607	10,984	10,984			229,650	229,650	159,268	159,268	1,686,401	1,458,000	575,987	571,562					1,088,836	450,143
TRAMMEL	2000	865,542	812,890									780,319	780,319							85,223	32,571
TRAMMEL	2001	897,705	847,630									783,095	783,095	3,885	3,885					110,725	60,650
TRAMMEL	2002	722,322	625,645									606,985	606,985							115,337	18,660
TRAMMEL	2003	614,471	577,722									536,609	536,609	802	802			231	231	76,829	40,080
TRAMMEL	2004	873,519	857,335									815,525	815,525	172	172					57,822	41,638
TRAMMEL	2005	1,009,842	988,668									962,705	960,067	16,260	16,260					30,877	12,341
TRAMMEL	2006	761,110	704,190									669,204	665,672	18,287	18,287					73,619	20,231
TRAMMEL	2007	728,020	707,050	25,650	25,650							644,552	644,552	23,975	23,975					33,843	12,873
TRAMMEL	2008	1,064,778	1,060,991	14,941	14,941							959,733	959,733	45,392	45,392					44,712	40,925

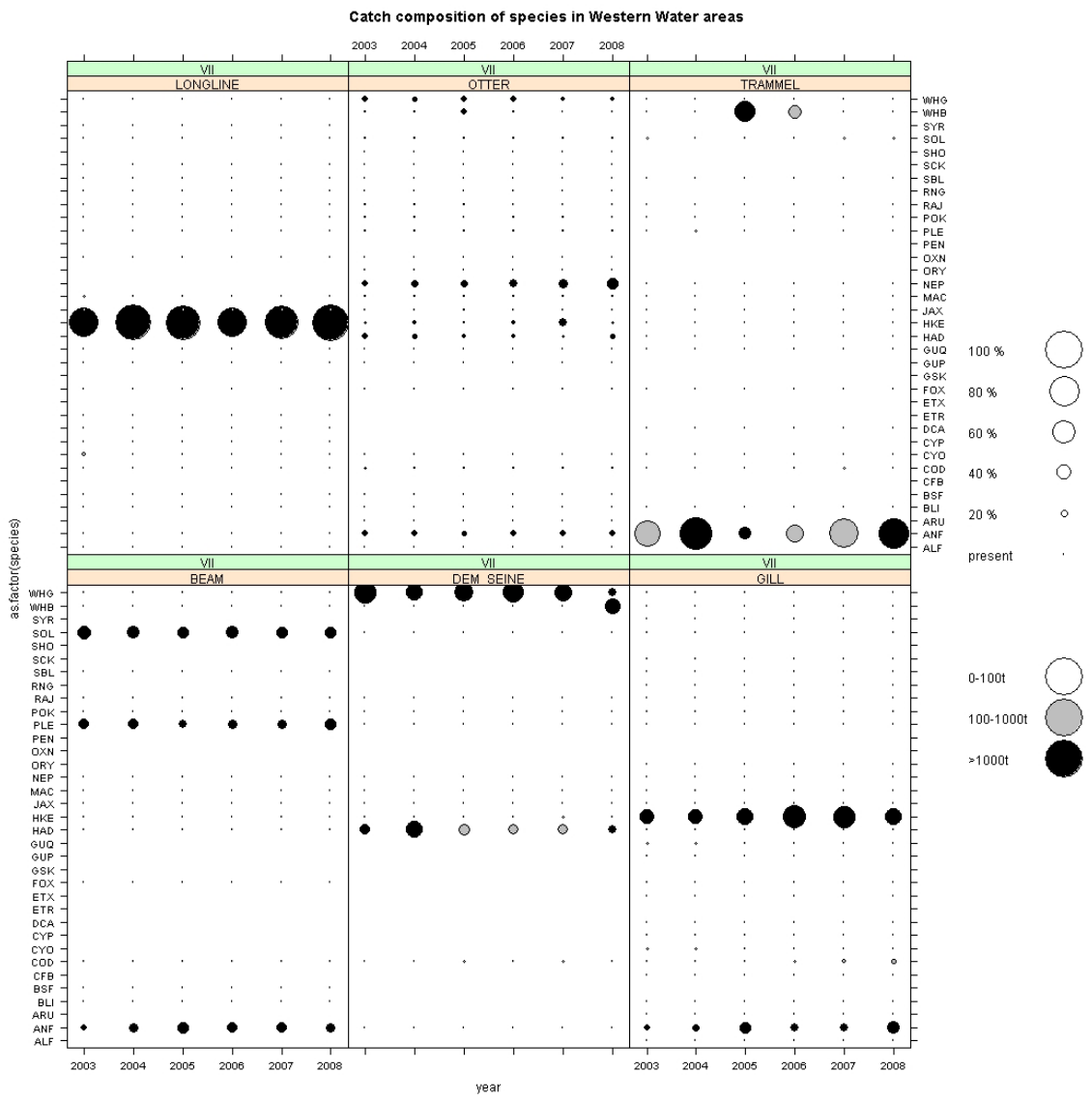

Figure 4.2.1.2.1 Catch composition by gear (countries combined) Western waters area VII. Size of circles represents relative contribution to catch, shading indicates quantity.

4.2.1.3. Western Waters Area VIII

Effort

Most of the effort in this area is by vessels over 15m (Table 4.2.1.3.1 and Table 4.2.1.3.2). France was the only country recording significant effort for the smaller category (over 10m <15m) a high proportion of this was by trawling and trammel netting. The main players in the over 15m vessel sizes were France and Spain with smaller amounts contributed by Belgium, Ireland, Portugal and UK. Results suggest that effort by France has increased 3 fold since 2000 but there is uncertainty about French and Spanish effort.

Table 4.2.1.3.2 shows the effort broken down by gear type. Spanish effort is mainly by otter trawl, longline and gillnet while French effort is predominantly otter trawl with increasing amounts of trammel net. Beam trawling was predominately carried out by Belgium.

Catch composition

Figure 4.2.1.3.1 shows the species composition taken by different gears. Otter trawling again took a wide variety of species in area VIII whereas trammel nets and beam trawls are dominated by sole and gillnets dominated by hake catches.

Table 4.2.1.3.1 Effort (KWdays) by member state and vessel size group Western Waters Area VIII

Area: VIII, dem effort

				BEL 742,465			DEN			GER 4,952			SPN 33,100,000		
Length	Year	Total	NonDeepTotal	Reported	Total	Excl. Deep	Reported	Total	Excl. Deep	Reported	Total	Excl. Deep	Reported	Total	Excl. Deep
o10t15m	2000	1,634,979	1,631,449												
o10t15m	2001	2,167,332	2,167,211												
o10t15m	2002	2,713,932	2,713,340												
o10t15m	2003	3,452,418	3,452,418												
o10t15m	2004	4,422,479	4,422,047												
o10t15m	2005	6,548,144	6,547,421												
o10t15m	2006	4,896,678	4,892,532												
o10t15m	2007	5,750,978	5,749,922												
o10t15m	2008	10,077,129	10,063,302												
o15m	2000	8,275,027	8,011,021		913,195	913,195		32,818	32,818						
o15m	2001	11,355,840	11,077,503		820,583	820,583		1,411	1,411						
o15m	2002	21,718,545	21,117,734		771,813	771,813								9,976,510	9,976,510
o15m	2003	22,059,322	21,515,975		618,667	618,667								8,807,542	8,807,542
o15m	2004	25,375,734	24,677,993	595,107	595,082	595,082							29,476,554	10,606,031	10,606,031
o15m	2005	31,824,106	30,638,032	766,753	766,754	766,754				201			30,389,024	11,021,595	11,021,595
o15m	2006	29,738,172	28,521,877	848,166	848,390	848,390				3,250			32,448,610	10,496,787	10,496,787
o15m	2007	28,764,313	28,105,666	886,979	887,031	887,031		11,850	11,850				31,445,000	8,385,468	8,385,468
o15m	2008	26,498,582	25,959,616	699,525	699,561	699,561							30,954,712	5,288,729	5,288,729
Total	2000	9,910,006	9,642,470		913,195	913,195		32,818	32,818						
Total	2001	13,523,172	13,244,714		820,583	820,583		1,411	1,411						
Total	2002	24,432,477	23,831,074		771,813	771,813								9,976,510	9,976,510
Total	2003	25,511,740	24,968,393		618,667	618,667								8,807,542	8,807,542
Total	2004	29,798,213	29,100,040		595,082	595,082								10,606,031	10,606,031
Total	2005	38,372,250	37,185,453		766,754	766,754								11,021,595	11,021,595
Total	2006	34,634,850	33,414,409		848,390	848,390								10,496,787	10,496,787
Total	2007	34,515,291	33,855,588		887,031	887,031		11,850	11,850					8,385,468	8,385,468
Total	2008	36,575,711	36,022,918		699,561	699,561								5,288,729	5,288,729

x

CONT.

	FRA 24,963,097			IRL			NED 403,327			POR 2552222			UK 218,406			gsa dem-VIII--
	Reported	Total	Excl. Deep	Reported	Total	Excl. Deep	Reported	Total	Excl. Deep	Reported	Total	Excl. Deep	Reported	Total	Excl. Deep	
		1,633,615	1,630,085											1,364	1,364	dem-VIII-o10t15m-2000
		2,167,238	2,167,117											94	94	dem-VIII-o10t15m-2001
		2,713,932	2,713,340													dem-VIII-o10t15m-2002
		3,452,274	3,452,274		144	144										dem-VIII-o10t15m-2003
		4,422,479	4,422,047													dem-VIII-o10t15m-2004
		6,547,271	6,546,548		873	873										dem-VIII-o10t15m-2005
		4,891,109	4,890,059		2,473	2,473								3,096		dem-VIII-o10t15m-2006
		5,750,978	5,749,922													dem-VIII-o10t15m-2007
		10,074,532	10,063,302											2,597		dem-VIII-o10t15m-2008
		7,170,713	6,912,678		12,116	12,116					127,792	127,792		18,393	12,422	dem-VIII-o15m-2000
		9,481,846	9,223,874		242	242		973,068	973,068		57,454	57,454		21,236	871	dem-VIII-o15m-2001
		10,716,542	10,181,513		11,050	11,050					169,359	169,359		73,271	7,489	dem-VIII-o15m-2002
		11,980,558	11,524,323		10,513	10,513					470,133	470,133		171,909	84,797	dem-VIII-o15m-2003
		13,582,870	13,080,723		18,230	18,230				429,768	218,011	218,011		355,510	159,916	dem-VIII-o15m-2004
	5,825,266	19,542,593	18,487,898		8,879	8,879				373,213	184,648	184,648	132,818	299,637	168,258	dem-VIII-o15m-2005
	8,194,917	17,317,734	16,485,152		45,284	45,284					436,879	436,879	129,531	593,098	209,385	dem-VIII-o15m-2006
	5,733,700	18,686,203	18,136,193		19,880	19,880				397,852	576,951	576,951	52,515	196,930	88,293	dem-VIII-o15m-2007
	5,911,210	19,706,776	19,267,569		1,800	1,800				562,377	602,680	602,680	124,954	199,036	99,277	dem-VIII-o15m-2008
		8,804,328	8,542,763		12,116	12,116					127,792	127,792		19,757	13,786	dem-VIII-Total-2000
		11,649,084	11,390,991		242	242		973,068	973,068		57,454	57,454		21,330	965	dem-VIII-Total-2001
		13,430,474	12,894,853		11,050	11,050					169,359	169,359		73,271	7,489	dem-VIII-Total-2002
		15,432,832	14,976,597		10,657	10,657					470,133	470,133		171,909	84,797	dem-VIII-Total-2003
		18,005,349	17,502,770		18,230	18,230					218,011	218,011		355,510	159,916	dem-VIII-Total-2004
		26,089,864	25,034,446		9,752	9,752					184,648	184,648		299,637	168,258	dem-VIII-Total-2005
		22,208,843	21,375,211		47,757	47,757					436,879	436,879		596,194	209,385	dem-VIII-Total-2006
		24,437,181	23,886,115		19,880	19,880					576,951	576,951		196,930	88,293	dem-VIII-Total-2007
		29,781,308	29,330,871		1,800	1,800					602,680	602,680		201,633	99,277	dem-VIII-Total-2008

Table 4.2.1.3.2 Effort (KWdays) by gear, member state and vessel size group Western Waters Area VIII

Area: VIII, o10t15m vessel lengths

Gear	Year	Total	NonDeepTotal	FRA Total	FRA Excl. Deep	IRL Total	IRL Excl. Deep	UK Total	UK Excl. Deep
BEAM	2000								
BEAM	2001								
BEAM	2002								
BEAM	2003	11,603	11,603	11,603	11,603				
BEAM	2004	21,522	21,522	21,522	21,522				
BEAM	2005	33,778	33,778	33,778	33,778				
BEAM	2006								
BEAM	2007								
BEAM	2008								
OTTER	2000	1,263,510	1,262,400	1,262,146	1,261,036			1,364	1,364
OTTER	2001	1,677,653	1,677,653	1,677,559	1,677,559			94	94
OTTER	2002	1,916,725	1,916,725	1,916,725	1,916,725				
OTTER	2003	2,542,119	2,542,119	2,542,119	2,542,119				
OTTER	2004	3,393,347	3,392,915	3,393,347	3,392,915				
OTTER	2005	4,593,523	4,593,523	4,593,523	4,593,523				
OTTER	2006	3,670,565	3,670,565	3,670,565	3,670,565				
OTTER	2007	3,869,352	3,869,352	3,869,352	3,869,352				
OTTER	2008	7,549,547	7,545,435	7,549,547	7,545,435				
LONGLINE	2000	8,664	7,541	8,664	7,541				
LONGLINE	2001	8,716	8,595	8,716	8,595				
LONGLINE	2002	16,314	15,722	16,314	15,722				
LONGLINE	2003	19,646	19,646	19,646	19,646				
LONGLINE	2004	17,858	17,858	17,858	17,858				
LONGLINE	2005	57,543	57,543	56,670	56,670	873	873		
LONGLINE	2006	35,358	34,437	32,885	31,964	2,473	2,473		
LONGLINE	2007	57,046	56,958	57,046	56,958				
LONGLINE	2008	56,712	54,507	56,712	54,507				
GILL	2000	200,580	199,283	200,580	199,283				
GILL	2001	229,026	229,026	229,026	229,026				
GILL	2002	416,115	416,115	416,115	416,115				
GILL	2003	506,481	506,481	506,337	506,337	144	144		
GILL	2004	544,547	544,547	544,547	544,547				
GILL	2005	882,774	882,453	882,774	882,453				
GILL	2006	325,716	322,491	322,620	322,491			3,096	
GILL	2007	334,001	333,130	334,001	333,130				
GILL	2008	512,402	505,439	510,352	505,439			2,050	
TRAMMEL	2000	162,225	162,225	162,225	162,225				
TRAMMEL	2001	251,937	251,937	251,937	251,937				
TRAMMEL	2002	364,778	364,778	364,778	364,778				
TRAMMEL	2003	372,569	372,569	372,569	372,569				
TRAMMEL	2004	445,205	445,205	445,205	445,205				
TRAMMEL	2005	980,526	980,124	980,526	980,124				
TRAMMEL	2006	865,039	865,039	865,039	865,039				
TRAMMEL	2007	1,490,579	1,490,482	1,490,579	1,490,482				
TRAMMEL	2008	1,958,468	1,957,921	1,957,921	1,957,921			547	

Area: VIII, All vessel lengths

Gear	Year	Total	NonDeepTotal	BEL Total	BEL Excl. Deep	DEN Total	DEN Excl. Deep	GER Total	GER Excl. Deep	SPN Total	SPN Excl. Deep	FRA Total	FRA Excl. Deep	IRL Total	IRL Excl. Deep	NED Total	NED Excl. Deep	POR Total	POR Excl. Deep	UK Total	UK Excl. Deep
BEAM	2000	913,195	913,195	913,195	913,195																
BEAM	2001	1,793,651	1,793,651	820,583	820,583											973,068	973,068				
BEAM	2002	771,813	771,813	771,813	771,813																
BEAM	2003	630,490	630,490	618,667	618,667							11,603	11,603							220	220
BEAM	2004	626,768	626,768	595,082	595,082							30,194	30,194	1,492	1,492						
BEAM	2005	800,532	800,532	766,754	766,754							33,778	33,778								
BEAM	2006	848,390	848,390	848,390	848,390																
BEAM	2007	887,031	887,031	887,031	887,031																
BEAM	2008	700,441	699,561	699,561	699,561															880	
OTTER	2000	7,546,061	7,339,432			32,818	32,818					7,372,410	7,165,781					127,792	127,792	13,041	13,041
OTTER	2001	9,788,428	9,567,954			1,411	1,411					9,729,227	9,508,753	242	242			57,454	57,454	94	94
OTTER	2002	18,147,643	17,638,836							6,660,722	6,660,722	11,303,092	10,794,285	11,050	11,050			165,290	165,290	7,489	7,489
OTTER	2003	19,430,433	19,097,019							5,849,603	5,849,603	13,044,410	12,710,996	10,028	10,028			458,908	458,908	67,484	67,484
OTTER	2004	22,446,239	22,006,565							6,898,278	6,898,278	15,200,513	14,760,839	10,663	10,663			207,691	207,691	129,094	129,094
OTTER	2005	27,916,059	26,950,705							6,750,866	6,750,866	20,924,061	19,958,707					160,742	160,742	80,390	80,390
OTTER	2006	23,866,472	23,245,515							6,388,696	6,388,696	16,908,348	16,287,391	33,917	33,917			431,075	431,075	104,436	104,436
OTTER	2007	22,631,425	22,305,542			11,850	11,850			3,819,058	3,819,058	18,236,710	17,910,827	6,448	6,448			557,359	557,359		
OTTER	2008	25,393,705	25,000,943							1,859,417	1,859,417	22,947,091	22,554,329	1,800	1,800			585,397	585,397		
LONGLINE	2000	25,982	16,590									19,266	15,845							6,716	745
LONGLINE	2001	62,367	39,487									42,002	39,487							20,365	
LONGLINE	2002	2,320,598	2,256,954							2,221,611	2,221,611	31,866	31,274					4,069	4,069	63,052	
LONGLINE	2003	2,017,712	1,930,600							1,881,808	1,881,808	28,081	28,081	485	485			10,296	10,296	97,042	9,930
LONGLINE	2004	2,519,503	2,413,521							2,338,670	2,338,670	54,960	54,960	4,275	4,275			10,320	10,320	111,278	5,296
LONGLINE	2005	2,896,817	2,831,320							2,694,971	2,694,971	95,440	94,307	9,752	9,752			23,906	23,906	72,748	8,384
LONGLINE	2006	2,658,319	2,583,390							2,493,947	2,493,947	67,177	65,689	13,840	13,840			1,671	1,671	81,684	8,243
LONGLINE	2007	3,168,820	3,117,148							2,986,992	2,986,992	75,927	75,839	13,432	13,432			19,592	19,592	72,877	21,293
LONGLINE	2008	2,095,527	2,038,137							1,887,411	1,887,411	122,374	106,944					17,283	17,283	68,459	26,499
GILL	2000	776,232	725,071									764,116	712,955	12,116	12,116						
GILL	2001	965,967	934,866									965,096	933,995							871	871
GILL	2002	2,064,027	2,035,075							965,713	965,713	1,095,584	1,069,362							2,730	
GILL	2003	2,032,900	1,916,362							931,463	931,463	1,093,201	976,663	144	144			929	929	7,163	7,163
GILL	2004	2,465,380	2,316,587							1,105,400	1,105,400	1,243,042	1,183,861	1,800	1,800					115,138	25,526
GILL	2005	3,317,027	3,169,771							1,285,362	1,285,362	1,885,166	1,804,925							146,499	79,494
GILL	2006	3,199,541	2,684,524							1,329,373	1,329,373	1,460,094	1,258,445							410,074	96,706
GILL	2007	2,720,826	2,447,050							1,266,546	1,266,546	1,330,227	1,113,504							124,053	67,000
GILL	2008	2,637,274	2,543,081							1,194,819	1,194,819	1,310,708	1,275,484							131,747	72,778
TRAMMEL	2000	648,536	648,182									648,536	648,182								
TRAMMEL	2001	912,759	908,756									912,759	908,756								
TRAMMEL	2002	1,128,396	1,128,396							128,464	128,464	999,932	999,932								
TRAMMEL	2003	1,400,205	1,393,922							144,668	144,668	1,255,537	1,249,254								
TRAMMEL	2004	1,740,323	1,736,599							263,683	263,683	1,476,640	1,472,916								
TRAMMEL	2005	3,441,815	3,433,125							290,396	290,396	3,151,419	3,142,729								
TRAMMEL	2006	4,062,128	4,052,590							284,771	284,771	3,773,224	3,763,686					4,133	4,133		
TRAMMEL	2007	5,107,189	5,098,817							312,872	312,872	4,794,317	4,785,945								
TRAMMEL	2008	5,748,764	5,741,196							347,082	347,082	5,401,135	5,394,114							547	

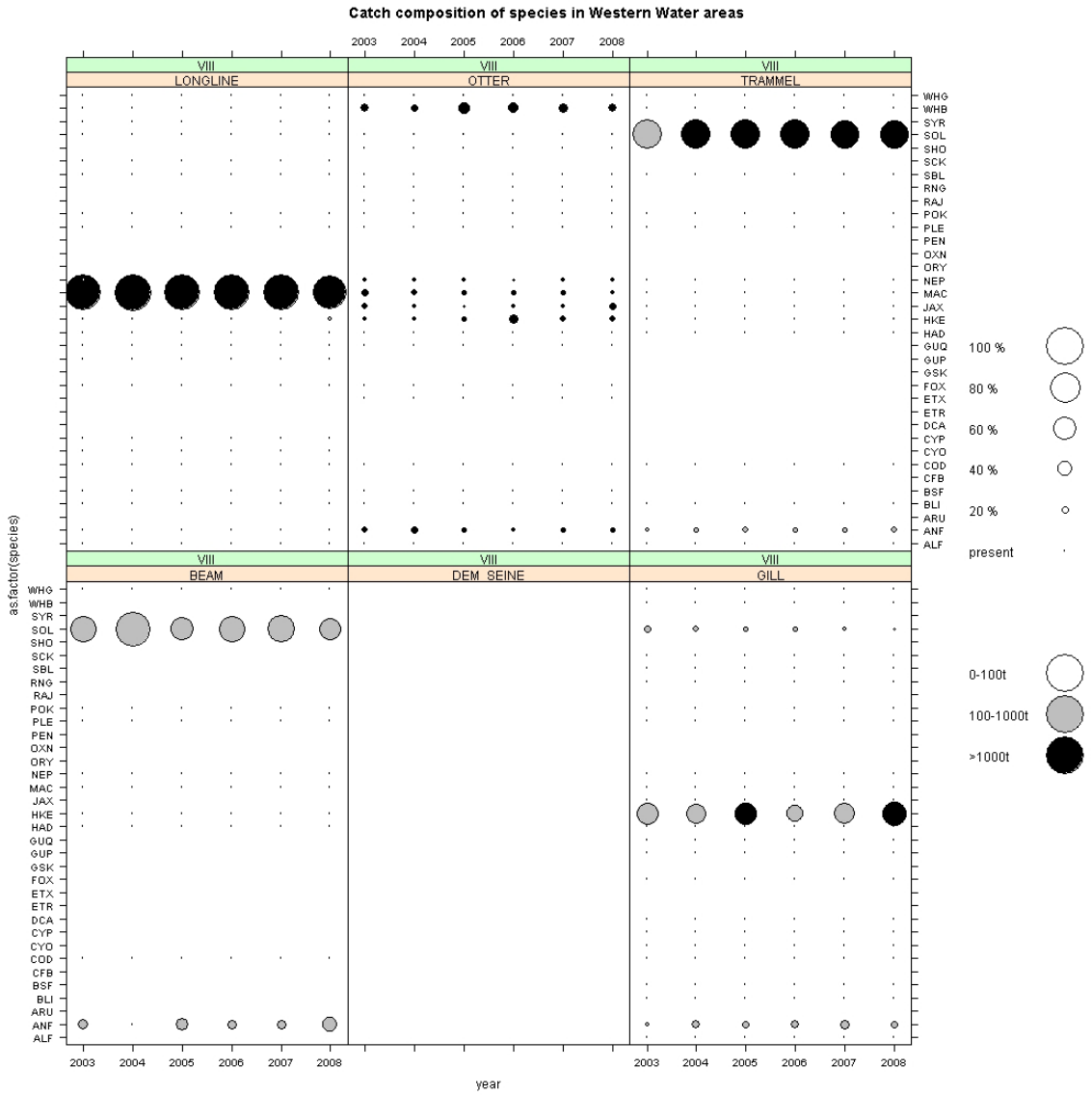

Figure 4.2.1.3.1 Catch composition by gear (countries combined) Western waters area VIII. Size of circles represents relative contribution to catch, shading indicates quantity.

4.2.1.4. Western Waters Area IX

Effort

The only countries recording significant landings were Spain and Portugal (Table 4.2.1.4.1 and Table 4.2.1.4.2). Most of the effort in this area is by vessels over 15m but Portugal recorded some effort by the smaller categories. Results suggest that Spanish effort has declined in recent years (although, as in other areas, the figures must be considered to be uncertain. Portuguese effort (in both vessel size categories) has increased over the time period. Overall effort figures are unreliable.

Table 4.2.1.4.2 shows the effort broken down by gear type. Spain recorded effort by all gear types but the principal activity was by trawling. Portugal also recorded high trawl effort with additional activity by gill nets, longline and trammel nets; the latter increasing in recent years.

Catch composition

Figure 4.2.1.3.1 shows the species composition taken by different gears. Longline, otter trawl, trammel net and gill nets all exhibited catches with a wide variety of species present (probably arising from various more specific fisheries each combined into the broad gear categories used here), however, each gear was ususually dominate by one species. For example, black scabbard fish in longlines and hake in trammel nets and gill nets.

Table 4.2.1.4.1 Effort (KWdays) by member state and vessel size group Western Waters Area IX

Area: IX, dem effort

				SPN 15,300,000			FRA			IRL			POR 29936606			UK		
Length	Year	Total	NonDeepTotal	Reported	Total	Excl. Deep	Reported	Total	Excl. Deep	Reported	Total	Excl. Deep	Reported	Total	Excl. Deep	Reported	Total	Excl. Deep
o10t15m	2000	38,267	38,267											38,267	38,267			
o10t15m	2001	48,190	48,190											48,190	48,190			
o10t15m	2002	35,781	35,781											35,781	35,781			
o10t15m	2003	213,955	213,955											213,955	213,955			
o10t15m	2004	100,676	100,676											100,676	100,676			
o10t15m	2005	523,946	518,011											523,946	518,011			
o10t15m	2006	474,600	459,090											474,600	459,090			
o10t15m	2007	547,043	470,603											547,043	470,603			
o10t15m	2008	581,353	527,895											581,353	527,895			
o15m	2000	8,558,074	8,558,074											8,558,074	8,558,074			
o15m	2001	4,982,513	4,982,513											4,982,513	4,982,513			
o15m	2002	13,029,978	13,029,978		7,490,995	7,490,995								5,538,983	5,538,983			
o15m	2003	17,090,258	17,088,721		7,085,082	7,085,082					4,208	4,208		10,000,968	9,999,431			
o15m	2004	18,579,993	18,579,993	12,311,526	7,350,620	7,350,620							23,901,798	11,229,373	11,229,373			
o15m	2005	18,636,559	18,564,437	12,340,556	6,226,631	6,226,631							28,190,938	12,409,928	12,337,806			
o15m	2006	17,348,713	17,026,477	14,644,031	5,510,857	5,510,857								11,702,195	11,515,620		135,661	
o15m	2007	16,847,567	16,302,451	14,061,924	5,273,278	5,273,278							11,720,323	11,562,383	11,029,173		11,906	
o15m	2008	14,997,306	14,561,259	13,418,105	4,435,371	4,435,371		2,576			522	522	11,461,854	10,558,837	10,125,366			
Total	2000	8,596,341	8,596,341											8,596,341	8,596,341			
Total	2001	5,030,703	5,030,703											5,030,703	5,030,703			
Total	2002	13,065,759	13,065,759		7,490,995	7,490,995								5,574,764	5,574,764			
Total	2003	17,304,213	17,302,676		7,085,082	7,085,082					4,208	4,208		10,214,923	10,213,386			
Total	2004	18,680,669	18,680,669		7,350,620	7,350,620								11,330,049	11,330,049			
Total	2005	19,160,505	19,082,448		6,226,631	6,226,631								12,933,874	12,855,817			
Total	2006	17,823,313	17,485,567		5,510,857	5,510,857								12,176,795	11,974,710		135,661	
Total	2007	17,394,610	16,773,054		5,273,278	5,273,278								12,109,426	11,499,776		11,906	
Total	2008	15,578,659	15,089,154		4,435,371	4,435,371		2,576			522	522		11,140,190	10,653,261			

Table 4.2.1.4.2 Effort (KWdays) by gear, member state and vessel size group Western Waters Area IX

Area: IX, o10t15m vessel lengths

Gear	Year	Total	NonDeepTotal	POR Total	POR Excl. Deep
OTTER	2000	10,200	10,200	10,200	10,200
OTTER	2001				
OTTER	2002				
OTTER	2003	60	60	60	60
OTTER	2004				
OTTER	2005	3,942	3,942	3,942	3,942
OTTER	2006	2,655	2,655	2,655	2,655
OTTER	2007	89	89	89	89
OTTER	2008				
LONGLINE	2000				
LONGLINE	2001				
LONGLINE	2002	552	552	552	552
LONGLINE	2003	7,110	7,110	7,110	7,110
LONGLINE	2004				
LONGLINE	2005	37,515	31,580	37,515	31,580
LONGLINE	2006	29,213	13,703	29,213	13,703
LONGLINE	2007	30,656	-45,784	30,656	-45,784
LONGLINE	2008	43,659	-9,799	43,659	-9,799
GILL	2000	15,905	15,905	15,905	15,905
GILL	2001	31,387	31,387	31,387	31,387
GILL	2002	24,115	24,115	24,115	24,115
GILL	2003	117,592	117,592	117,592	117,592
GILL	2004	38,534	38,534	38,534	38,534
GILL	2005	222,563	222,563	222,563	222,563
GILL	2006	169,971	169,971	169,971	169,971
GILL	2007	123,880	123,880	123,880	123,880
GILL	2008	122,714	122,714	122,714	122,714
TRAMMEL	2000	12,162	12,162	12,162	12,162
TRAMMEL	2001	16,803	16,803	16,803	16,803
TRAMMEL	2002	11,114	11,114	11,114	11,114
TRAMMEL	2003	89,193	89,193	89,193	89,193
TRAMMEL	2004	62,142	62,142	62,142	62,142
TRAMMEL	2005	259,926	259,926	259,926	259,926
TRAMMEL	2006	272,761	272,761	272,761	272,761
TRAMMEL	2007	392,418	392,418	392,418	392,418
TRAMMEL	2008	414,980	414,980	414,980	414,980

Area: IX, o15m vessel lengths

Gear	Year	NonDeepTotal		SPN		FRA		IRL		POR		UK	
		Total		Total	Excl. Deep	Total	Excl. Deep	Total	Excl. Deep	Total	Excl. Deep	Total	Excl. Deep
BEAM	2000												
BEAM	2001												
BEAM	2002	17,481	17,481	17,481	17,481								
BEAM	2003	5,607	5,607	5,607	5,607								
BEAM	2004	8,843	8,843	8,843	8,843								
BEAM	2005	8,086	8,086	8,086	8,086								
BEAM	2006	12,394	12,394	12,394	12,394								
BEAM	2007	13,496	13,496	13,496	13,496								
BEAM	2008	11,821	11,821	11,821	11,821								
OTTER	2000	7,559,553	7,559,553							7,559,553	7,559,553		
OTTER	2001	3,831,253	3,831,253							3,831,253	3,831,253		
OTTER	2002	11,263,959	11,263,959	6,622,588	6,622,588					4,641,371	4,641,371		
OTTER	2003	13,967,680	13,967,680	6,325,145	6,325,145			4,208	4,208	7,638,327	7,638,327		
OTTER	2004	14,858,954	14,858,954	6,271,440	6,271,440					8,587,514	8,587,514		
OTTER	2005	14,055,461	14,055,461	5,161,134	5,161,134					8,894,327	8,894,327		
OTTER	2006	12,900,032	12,900,032	4,487,519	4,487,519					8,412,513	8,412,513		
OTTER	2007	12,893,147	12,893,147	4,083,886	4,083,886					8,809,261	8,809,261		
OTTER	2008	11,324,956	11,324,956	3,147,732	3,147,732			522	522	8,176,702	8,176,702		
DEM_SEINE	2000												
DEM_SEINE	2001												
DEM_SEINE	2002	70	70	70	70								
DEM_SEINE	2003												
DEM_SEINE	2004	441	441	441	441								
DEM_SEINE	2005	2,251	2,251	2,251	2,251								
DEM_SEINE	2006	4,781	4,781	4,781	4,781								
DEM_SEINE	2007	5,629	5,629	5,629	5,629								
DEM_SEINE	2008	6,427	6,427	6,427	6,427								
LONGLINE	2000	395,975	395,975							395,975	395,975		
LONGLINE	2001	401,639	401,639							401,639	401,639		
LONGLINE	2002	532,802	532,802	317,715	317,715					215,087	215,087		
LONGLINE	2003	1,186,117	1,184,580	274,875	274,875					911,242	909,705		
LONGLINE	2004	1,091,578	1,091,578	407,985	407,985					683,593	683,593		
LONGLINE	2005	1,399,813	1,327,691	324,083	324,083					1,075,730	1,003,608		
LONGLINE	2006	1,235,341	1,043,838	291,183	291,183					939,230	752,655	4,928	
LONGLINE	2007	992,933	459,723	281,057	281,057					711,876	178,666		
LONGLINE	2008	1,058,651	625,180	286,622	286,622					772,029	338,558		
GILL	2000	402,951	402,951							402,951	402,951		
GILL	2001	432,091	432,091							432,091	432,091		
GILL	2002	743,905	743,905	366,768	366,768					377,137	377,137		
GILL	2003	1,098,975	1,098,975	317,439	317,439					781,536	781,536		
GILL	2004	1,081,306	1,081,306	379,350	379,350					701,956	701,956		
GILL	2005	1,427,165	1,427,165	466,059	466,059					961,106	961,106		
GILL	2006	1,239,323	1,108,590	459,888	459,888					648,702	648,702	130,733	
GILL	2007	1,265,771	1,253,865	598,769	598,769					655,096	655,096	11,906	
GILL	2008	1,311,063	1,308,487	649,329	649,329	2,576				659,158	659,158		
TRAMMEL	2000	199,595	199,595							199,595	199,595		
TRAMMEL	2001	317,530	317,530							317,530	317,530		
TRAMMEL	2002	471,761	471,761	166,373	166,373					305,388	305,388		
TRAMMEL	2003	831,879	831,879	162,016	162,016					669,863	669,863		
TRAMMEL	2004	1,538,871	1,538,871	282,561	282,561					1,256,310	1,256,310		
TRAMMEL	2005	1,743,783	1,743,783	265,018	265,018					1,478,765	1,478,765		
TRAMMEL	2006	1,956,842	1,956,842	255,092	255,092					1,701,750	1,701,750		
TRAMMEL	2007	1,676,591	1,676,591	290,441	290,441					1,386,150	1,386,150		
TRAMMEL	2008	1,284,388	1,284,388	333,440	333,440					950,948	950,948		

Area: IX, All vessel lengths

Gear	Year	Total	NonDeepTotal	SPN Total	SPN Excl. Deep	FRA Total	FRA Excl. Deep	IRL Total	IRL Excl. Deep	POR Total	POR Excl. Deep	UK Total	UK Excl. Deep
BEAM	2000												
BEAM	2001												
BEAM	2002	17,481	17,481	17,481	17,481								
BEAM	2003	5,607	5,607	5,607	5,607								
BEAM	2004	8,843	8,843	8,843	8,843								
BEAM	2005	8,086	8,086	8,086	8,086								
BEAM	2006	12,394	12,394	12,394	12,394								
BEAM	2007	13,496	13,496	13,496	13,496								
BEAM	2008	11,821	11,821	11,821	11,821								
OTTER	2000	7,569,753	7,569,753							7,569,753	7,569,753		
OTTER	2001	3,831,253	3,831,253							3,831,253	3,831,253		
OTTER	2002	11,263,959	11,263,959	6,622,588	6,622,588					4,641,371	4,641,371		
OTTER	2003	13,967,740	13,967,740	6,325,145	6,325,145			4,208	4,208	7,638,387	7,638,387		
OTTER	2004	14,858,954	14,858,954	6,271,440	6,271,440					8,587,514	8,587,514		
OTTER	2005	14,059,403	14,059,403	5,161,134	5,161,134					8,898,269	8,898,269		
OTTER	2006	12,902,687	12,902,687	4,487,519	4,487,519					8,415,168	8,415,168		
OTTER	2007	12,893,236	12,893,236	4,083,886	4,083,886					8,809,350	8,809,350		
OTTER	2008	11,324,956	11,324,956	3,147,732	3,147,732			522	522	8,176,702	8,176,702		
DEM_SEINE	2000												
DEM_SEINE	2001												
DEM_SEINE	2002	70	70	70	70								
DEM_SEINE	2003												
DEM_SEINE	2004	441	441	441	441								
DEM_SEINE	2005	2,251	2,251	2,251	2,251								
DEM_SEINE	2006	4,781	4,781	4,781	4,781								
DEM_SEINE	2007	5,629	5,629	5,629	5,629								
DEM_SEINE	2008	6,427	6,427	6,427	6,427								
LONGLINE	2000	395,975	395,975							395,975	395,975		
LONGLINE	2001	401,639	401,639							401,639	401,639		
LONGLINE	2002	533,354	533,354	317,715	317,715					215,639	215,639		
LONGLINE	2003	1,193,227	1,191,690	274,875	274,875					918,352	916,815		
LONGLINE	2004	1,091,578	1,091,578	407,985	407,985					683,593	683,593		
LONGLINE	2005	1,437,328	1,359,271	324,083	324,083					1,113,245	1,035,188		
LONGLINE	2006	1,264,554	1,057,541	291,183	291,183					968,443	766,358	4,928	
LONGLINE	2007	1,023,589	413,939	281,057	281,057					742,532	132,882		
LONGLINE	2008	1,102,310	615,381	286,622	286,622					815,688	328,759		
GILL	2000	418,856	418,856							418,856	418,856		
GILL	2001	463,478	463,478							463,478	463,478		
GILL	2002	768,020	768,020	366,768	366,768					401,252	401,252		
GILL	2003	1,216,567	1,216,567	317,439	317,439					899,128	899,128		
GILL	2004	1,119,840	1,119,840	379,350	379,350					740,490	740,490		
GILL	2005	1,649,728	1,649,728	466,059	466,059					1,183,669	1,183,669		
GILL	2006	1,409,294	1,278,561	459,888	459,888					818,673	818,673	130,733	
GILL	2007	1,389,651	1,377,745	598,769	598,769					778,976	778,976	11,906	
GILL	2008	1,433,777	1,431,201	649,329	649,329	2,576				781,872	781,872		
TRAMMEL	2000	211,757	211,757							211,757	211,757		
TRAMMEL	2001	334,333	334,333							334,333	334,333		
TRAMMEL	2002	482,875	482,875	166,373	166,373					316,502	316,502		
TRAMMEL	2003	921,072	921,072	162,016	162,016					759,056	759,056		
TRAMMEL	2004	1,601,013	1,601,013	282,561	282,561					1,318,452	1,318,452		
TRAMMEL	2005	2,003,709	2,003,709	265,018	265,018					1,738,691	1,738,691		
TRAMMEL	2006	2,229,603	2,229,603	255,092	255,092					1,974,511	1,974,511		
TRAMMEL	2007	2,069,009	2,069,009	290,441	290,441					1,778,568	1,778,568		
TRAMMEL	2008	1,699,368	1,699,368	333,440	333,440					1,365,928	1,365,928		

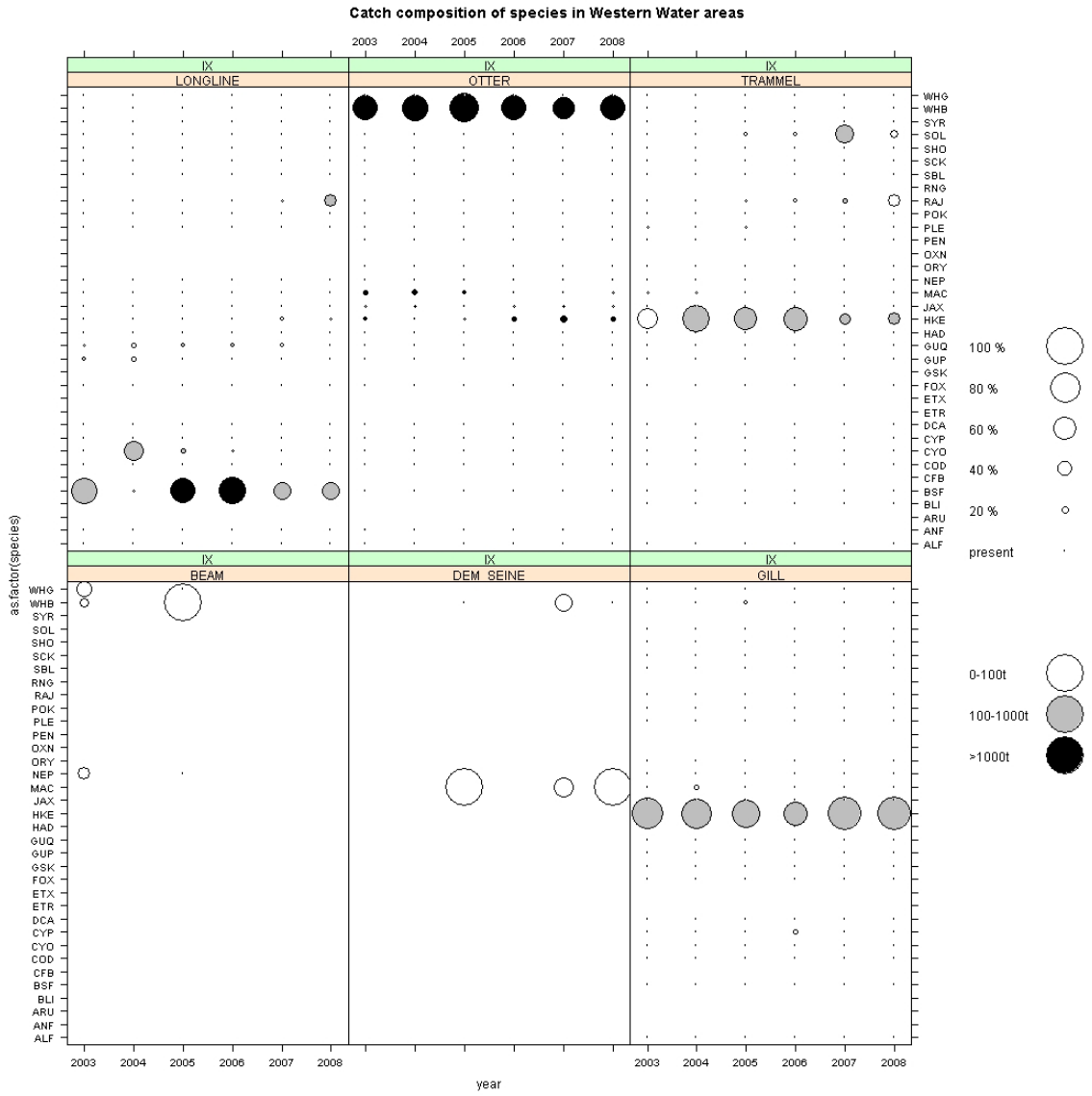

Figure 4.2.1.4.1 Catch composition by gear (countries combined) Western waters area IX. Size of circles represents relative contribution to catch, shading indicates quantity.

4.2.1.5. Western Waters Area X

Effort and catch composition

All of the effort in this area is by vessels over 15m (Table 4.2.1.5.1) and most of the effort was recorded by Portugal. Sporadic effort by Ireland and UK also occurred. The trend in Portuguese effort suggests an increase over the time period . Almost all of the effort is by longline (Table 4.2.1.5.2). Catches comprise mainly deep water sharks and black scabbard fish (from different fisheries) (Figure 4.2.1.5.1). There appear to be no recorded catches in 2008 despite the relatively high effort.

Table 4.2.1.5.1 Effort (KWdays) by member state and vessel size group Western Waters Area X

Area: X, dem effort

				IRL			POR			UK		
							2360033					
Length	Year	Total	NonDeepTotal	Reported	Total	Excl. Deep	Reported	Total	Excl. Deep	Reported	Total	Excl. Deep
o10t15m	2000											
o10t15m	2001											
o10t15m	2002											
o10t15m	2003											
o10t15m	2004											
o10t15m	2005											
o10t15m	2006											
o10t15m	2007											
o10t15m	2008											
o15m	2000	212,225	181,680					181,680	181,680		30,545	
o15m	2001	111,088	111,088					111,088	111,088			
o15m	2002	169,259	169,259					169,259	169,259			
o15m	2003	334,572	334,572					334,572	334,572			
o15m	2004	383,302	351,924		31,378			351,924	351,924			
o15m	2005	447,707	439,051		8,656		48,165	439,051	439,051			
o15m	2006	524,761	524,761					524,761	524,761			
o15m	2007	605,236	563,498				517,204	605,236	563,498			
o15m	2008	562,747	550,435				539,658	562,747	550,435			
Total	2000	212,225	181,680					181,680	181,680		30,545	
Total	2001	111,088	111,088					111,088	111,088			
Total	2002	169,259	169,259					169,259	169,259			
Total	2003	334,572	334,572					334,572	334,572			
Total	2004	383,302	351,924		31,378			351,924	351,924			
Total	2005	447,707	439,051		8,656			439,051	439,051			
Total	2006	524,761	524,761					524,761	524,761			
Total	2007	605,236	563,498					605,236	563,498			
Total	2008	562,747	550,435					562,747	550,435			

Table 4.2.1.5.2 Effort (KWdays) by gear, member state and vessel size group Western Waters Area X

Area: X, o15m vessel lengths

			NonDeepTo	IRL		POR		UK	
Gear	Year	Total	tal	Total	Excl. Deep	Total	Excl. Deep	Total	Excl. Deep
OTTER	2000	30,545						30,545	
OTTER	2001								
OTTER	2002								
OTTER	2003								
OTTER	2004	31,378		31,378					
OTTER	2005	8,656		8,656					
OTTER	2006								
OTTER	2007	750	750			750	750		
OTTER	2008								
LONGLINE	2000	181,680	181,680			181,680	181,680		
LONGLINE	2001	98,972	98,972			98,972	98,972		
LONGLINE	2002	169,259	169,259			169,259	169,259		
LONGLINE	2003	319,607	319,607			319,607	319,607		
LONGLINE	2004	351,924	351,924			351,924	351,924		
LONGLINE	2005	439,051	439,051			439,051	439,051		
LONGLINE	2006	524,761	524,761			524,761	524,761		
LONGLINE	2007	604,486	562,748			604,486	562,748		
LONGLINE	2008	562,747	550,435			562,747	550,435		
GILL	2000								
GILL	2001								
GILL	2002								
GILL	2003	14,965	14,965			14,965	14,965		
GILL	2004								
GILL	2005								
GILL	2006								
GILL	2007								
GILL	2008								
TRAMMEL	2000								
TRAMMEL	2001	12,116	12,116			12,116	12,116		
TRAMMEL	2002								
TRAMMEL	2003								
TRAMMEL	2004								
TRAMMEL	2005								
TRAMMEL	2006								
TRAMMEL	2007								
TRAMMEL	2008								

Area: X, All vessel lengths

Gear	Year	Total	NonDeepTotal	IRL Total	IRL Excl. Deep	POR Total	POR Excl. Deep	UK Total	UK Excl. Deep
OTTER	2000	30,545						30,545	
OTTER	2001								
OTTER	2002								
OTTER	2003								
OTTER	2004	31,378		31,378					
OTTER	2005	8,656		8,656					
OTTER	2006								
OTTER	2007	750	750			750	750		
OTTER	2008								
LONGLINE	2000	181,680	181,680			181,680	181,680		
LONGLINE	2001	98,972	98,972			98,972	98,972		
LONGLINE	2002	169,259	169,259			169,259	169,259		
LONGLINE	2003	319,607	319,607			319,607	319,607		
LONGLINE	2004	351,924	351,924			351,924	351,924		
LONGLINE	2005	439,051	439,051			439,051	439,051		
LONGLINE	2006	524,761	524,761			524,761	524,761		
LONGLINE	2007	604,486	562,748			604,486	562,748		
LONGLINE	2008	562,747	550,435			562,747	550,435		
GILL	2000								
GILL	2001								
GILL	2002								
GILL	2003	14,965	14,965			14,965	14,965		
GILL	2004								
GILL	2005								
GILL	2006								
GILL	2007								
GILL	2008								
TRAMMEL	2000								
TRAMMEL	2001	12,116	12,116			12,116	12,116		
TRAMMEL	2002								
TRAMMEL	2003								
TRAMMEL	2004								
TRAMMEL	2005								
TRAMMEL	2006								
TRAMMEL	2007								
TRAMMEL	2008								

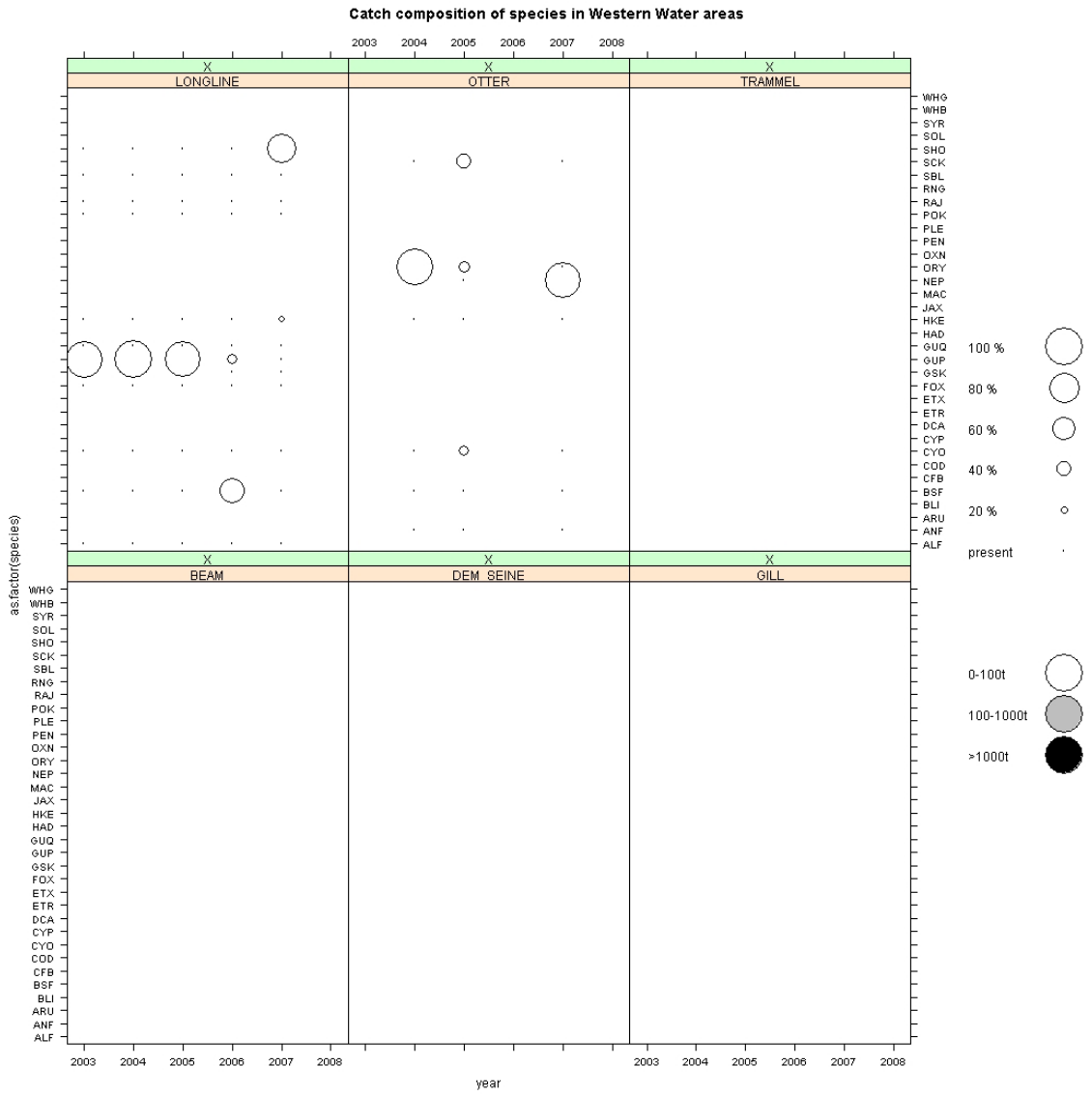

Figure 4.2.1.5.1 Catch composition by gear (countries combined) Western waters area X. Size of circles represents relative contribution to catch, shading indicates quantity.

4.2.1.6. Western Waters CECAF 34.1.1

Effort and catch composition

Most of the effort in this area is by vessels over 15m (Table 4.2.1.6.1). Portugal and Spain were the only countries involved. Effort figures are uncertain and contain anomalous entries – data from Spain appear incomplete. Much of the effort by the larger vessel category was by otter trawl and longline (Table 4.2.1.6.2) although this only refers to Portugal since Spain did not provide a breakdown. Catch composition information for otter trawls was very sparse while that for longlines indicated that mainly deepwater sharks were taken in this area.

Table 4.2.1.6.1 Effort (KWdays) by member state and vessel size group Western Waters Area CECAF 34.1.1

Area: 34.1.1, dem effort

				SPN 14,500,000			POR 94659		
Length	Year	Total	NonDeepTotal	Reported	Total	Excl. Deep	Reported	Total	Excl. Deep
o10t15m	2000								
o10t15m	2001								
o10t15m	2002								
o10t15m	2003								
o10t15m	2004								
o10t15m	2005								
o10t15m	2006								
o10t15m	2007	9,446	-7,275					9,446	-7,275
o10t15m	2008		-3,641						-3,641
o15m	2000	156,460	156,460					156,460	156,460
o15m	2001	66,203	66,203					66,203	66,203
o15m	2002	43,601	43,601					43,601	43,601
o15m	2003	24,326	24,326					24,326	24,326
o15m	2004	17,385	17,385	11,620,854			32,209	17,385	17,385
o15m	2005	63,345	63,345	11,128,673			94,173	63,345	63,345
o15m	2006	29,005	6,755	11,934,906				29,005	6,755
o15m	2007	30,589	-52,188	8,998,990			34,609	30,589	-52,188
o15m	2008	180,015	145,684	10,997,803			40,505	180,015	145,684
Total	2000	156,460	156,460					156,460	156,460
Total	2001	66,203	66,203					66,203	66,203
Total	2002	43,601	43,601					43,601	43,601
Total	2003	24,326	24,326					24,326	24,326
Total	2004	17,385	17,385					17,385	17,385
Total	2005	63,345	63,345					63,345	63,345
Total	2006	29,005	6,755					29,005	6,755
Total	2007	40,035	-59,463					40,035	-59,463
Total	2008	180,015	142,043					180,015	142,043

Table 4.2.1.6.2 Effort (KWdays) by gear, member state and vessel size group Western Waters Area CECAF 34.1.1

Area: 34.1.1, o10t15m vessel lengths

			NonDeepTo	POR	
Gear	Year	Total	tal	Total	Excl. Deep
LONGLINE	2000				
LONGLINE	2001				
LONGLINE	2002				
LONGLINE	2003				
LONGLINE	2004				
LONGLINE	2005				
LONGLINE	2006				
LONGLINE	2007	9,446	-7,275	9,446	-7,275
LONGLINE	2008		-3,641		-3,641

Area: 34.1.1, o15m vessel lengths

			NonDeepTo	POR	
Gear	Year	Total	tal	Total	Excl. Deep
OTTER	2000	151,900	151,900	151,900	151,900
OTTER	2001	57,624	57,624	57,624	57,624
OTTER	2002	43,601	43,601	43,601	43,601
OTTER	2003				
OTTER	2004				
OTTER	2005	368	368	368	368
OTTER	2006				
OTTER	2007				
OTTER	2008	99,382	99,382	99,382	99,382
LONGLINE	2000	4,560	4,560	4,560	4,560
LONGLINE	2001	8,579	8,579	8,579	8,579
LONGLINE	2002				
LONGLINE	2003	24,326	24,326	24,326	24,326
LONGLINE	2004	17,027	17,027	17,027	17,027
LONGLINE	2005	62,977	62,977	62,977	62,977
LONGLINE	2006	29,005	6,755	29,005	6,755
LONGLINE	2007	30,589	-52,188	30,589	-52,188
LONGLINE	2008	80,633	46,302	80,633	46,302
TRAMMEL	2000				
TRAMMEL	2001				
TRAMMEL	2002				
TRAMMEL	2003				
TRAMMEL	2004	358	358	358	358
TRAMMEL	2005				
TRAMMEL	2006				
TRAMMEL	2007				
TRAMMEL	2008				

Area: 34.1.1, All vessel lengths

Gear	Year	Total	NonDeepTotal	POR Total	POR Excl. Deep
OTTER	2000	151,900	151,900	151,900	151,900
OTTER	2001	57,624	57,624	57,624	57,624
OTTER	2002	43,601	43,601	43,601	43,601
OTTER	2003				
OTTER	2004				
OTTER	2005	368	368	368	368
OTTER	2006				
OTTER	2007				
OTTER	2008	99,382	99,382	99,382	99,382
LONGLINE	2000	4,560	4,560	4,560	4,560
LONGLINE	2001	8,579	8,579	8,579	8,579
LONGLINE	2002				
LONGLINE	2003	24,326	24,326	24,326	24,326
LONGLINE	2004	17,027	17,027	17,027	17,027
LONGLINE	2005	62,977	62,977	62,977	62,977
LONGLINE	2006	29,005	6,755	29,005	6,755
LONGLINE	2007	40,035	-59,463	40,035	-59,463
LONGLINE	2008	80,633	42,661	80,633	42,661
TRAMMEL	2000				
TRAMMEL	2001				
TRAMMEL	2002				
TRAMMEL	2003				
TRAMMEL	2004	358	358	358	358
TRAMMEL	2005				
TRAMMEL	2006				
TRAMMEL	2007				
TRAMMEL	2008				

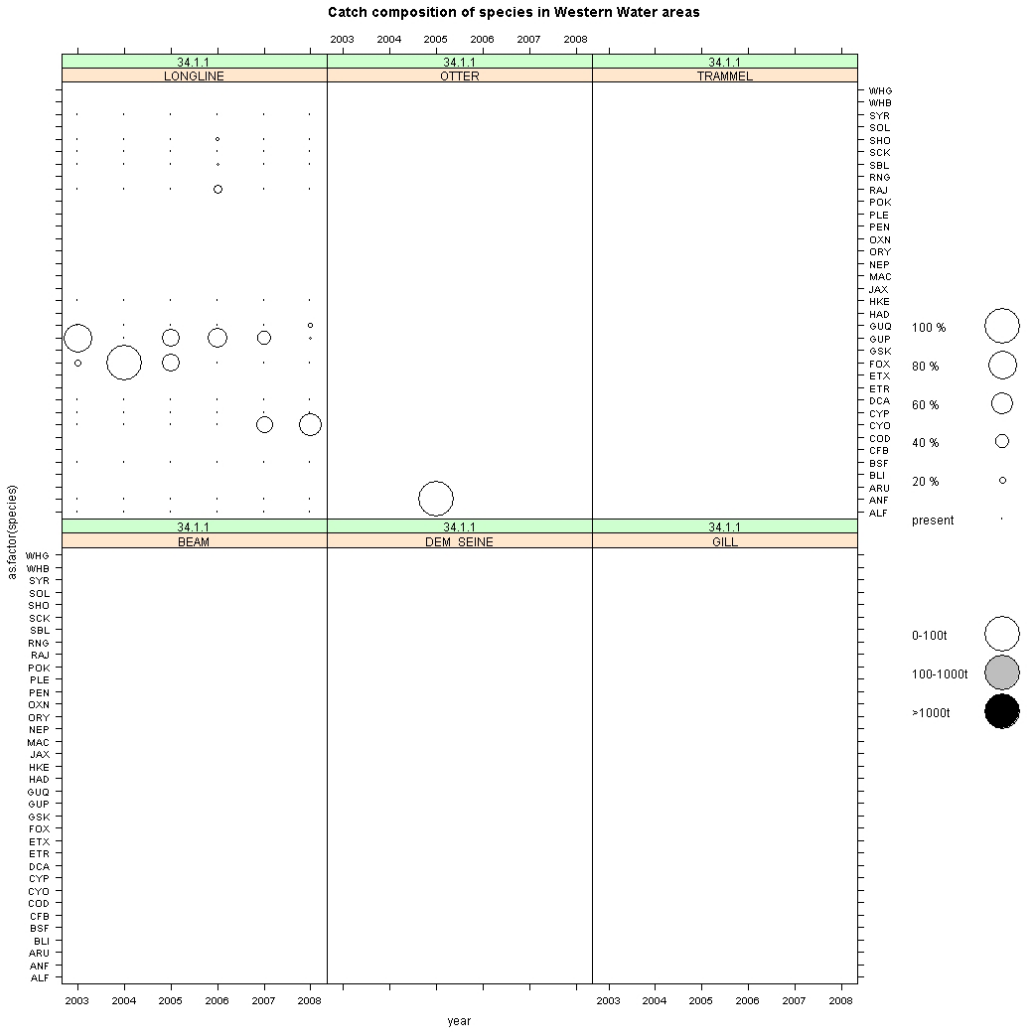

Figure 4.2.1.6.1 Catch composition by gear (countries combined) Western waters area CECAF 34.1.1. Size of circles represents relative contribution to catch, shading indicates quantity.

4.2.1.7. Western Waters CECAF 34.1.2

Effort and catch composition

Most of the effort in this area is by vessels over 15m (Table 4.2.1.7.1). Portugal and Spain were again the only countries involved. There is a similar picture of effort as in 34.1.1 with uncertainty in values and some anomalous entries. Most of the effort by the larger vessel category was by longline (Table 4.2.1.7.2) although this only refers to Portugal since Spain did not provide a breakdown. Catch composition information for longlines (Figure 4.2.1.7.1) indicated that mainly forkbeards and deepwater sharks were taken in this area.

Table 4.2.1.7.1 Effort (KWdays) by member state and vessel size group Western Waters Area CECAF 34.1.2

Area: 34.1.2, dem effort

				SPN 4,800,000			POR 378452		
Length	Year	Total	NonDeepTotal	Reported	Total	Excl. Deep	Reported	Total	Excl. Deep
o10t15m	2000								
o10t15m	2001								
o10t15m	2002								
o10t15m	2003								
o10t15m	2004								
o10t15m	2005								
o10t15m	2006								
o10t15m	2007								
o10t15m	2008								
o15m	2000	4,092	4,092					4,092	4,092
o15m	2001	11,814	11,814					11,814	11,814
o15m	2002	12,480	12,480					12,480	12,480
o15m	2003	25,699	25,699					25,699	25,699
o15m	2004	25,243	25,243	3,671,520			46,847	25,243	25,243
o15m	2005	39,917	39,917	3,834,575			72,285	39,917	39,917
o15m	2006	50,525	37,870	3,966,821				50,525	37,870
o15m	2007	15,487	-47,555	3,027,024			344,206	15,487	-47,555
o15m	2008	35,604	-3,484	3,620,790			361,459	35,604	-3,484
Total	2000	4,092	4,092					4,092	4,092
Total	2001	11,814	11,814					11,814	11,814
Total	2002	12,480	12,480					12,480	12,480
Total	2003	25,699	25,699					25,699	25,699
Total	2004	25,243	25,243					25,243	25,243
Total	2005	39,917	39,917					39,917	39,917
Total	2006	50,525	37,870					50,525	37,870
Total	2007	15,487	-60,275					15,487	-60,275
Total	2008	35,604	-51,219					35,604	-51,219

Table 4.2.1.7.2 Effort (KWdays) by gear, member state and vessel size group Western Waters Area CECAF 34.1.2

Area: 34.1.2, o15m vessel lengths

			NonDeepTo	POR	
Gear	Year	Total	tal	Total	Excl. Deep
LONGLINE	2000	4,092	4,092	4,092	4,092
LONGLINE	2001	11,814	11,814	11,814	11,814
LONGLINE	2002	12,480	12,480	12,480	12,480
LONGLINE	2003	25,699	25,699	25,699	25,699
LONGLINE	2004	24,706	24,706	24,706	24,706
LONGLINE	2005	39,917	39,917	39,917	39,917
LONGLINE	2006	50,525	37,870	50,525	37,870
LONGLINE	2007	15,487	-47,555	15,487	-47,555
LONGLINE	2008	35,604	-3,484	35,604	-3,484
TRAMMEL	2000				
TRAMMEL	2001				
TRAMMEL	2002				
TRAMMEL	2003				
TRAMMEL	2004	537	537	537	537
TRAMMEL	2005				
TRAMMEL	2006				
TRAMMEL	2007				
TRAMMEL	2008				

Area: 34.1.2, All vessel lengths

Gear	Year	Total	NonDeepTotal	POR Total	POR Excl. Deep
LONGLINE	2000	4,092	4,092	4,092	4,092
LONGLINE	2001	11,814	11,814	11,814	11,814
LONGLINE	2002	12,480	12,480	12,480	12,480
LONGLINE	2003	25,699	25,699	25,699	25,699
LONGLINE	2004	24,706	24,706	24,706	24,706
LONGLINE	2005	39,917	39,917	39,917	39,917
LONGLINE	2006	50,525	37,870	50,525	37,870
LONGLINE	2007	15,487	-60,275	15,487	-60,275
LONGLINE	2008	35,604	-51,219	35,604	-51,219
TRAMMEL	2000				
TRAMMEL	2001				
TRAMMEL	2002				
TRAMMEL	2003				
TRAMMEL	2004	537	537	537	537
TRAMMEL	2005				
TRAMMEL	2006				
TRAMMEL	2007				
TRAMMEL	2008				

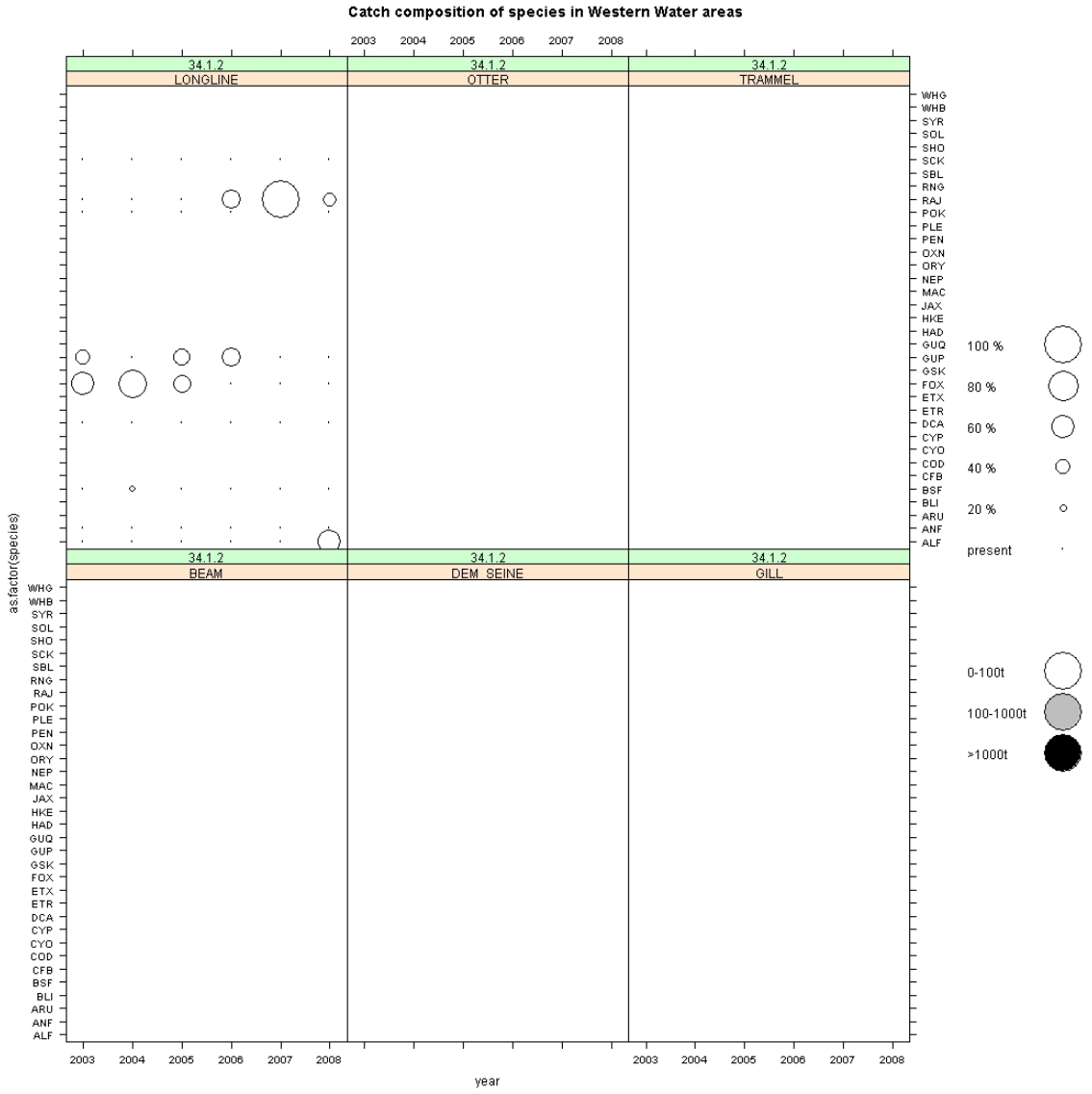

Figure 4.2.1.7.1 Catch composition by gear (countries combined) Western waters area CECAF 34.1.2. Size of circles represents relative contribution to catch, shading indicates quantity.

4.2.1.8. Western Waters CECAF 34.2.0

Effort and catch composition

All of the effort in this area is by vessels over 15m (Table 4.2.1.8.1). Portugal was the only country involved. Effort (which was entirely by longline (Table 4.2.1.8.2) has apparently increased over the time period. Catch composition information was very sparse and only limited landings were recorded for this area.

Table 4.2.1.8.1 Effort (KWdays) by member state and vessel size group Western Waters Area CECAF 34.2.0

Area: 34.2.0, dem effort

Length	Year	Total	NonDeepTotal	Reported	POR 406872 Total	Excl. Deep
o10t15m	2000					
o10t15m	2001					
o10t15m	2002					
o10t15m	2003					
o10t15m	2004					
o10t15m	2005					
o10t15m	2006					
o10t15m	2007					
o10t15m	2008					
o15m	2000	15,468	15,468		15,468	15,468
o15m	2001	30,065	30,065		30,065	30,065
o15m	2002	33,723	33,723		33,723	33,723
o15m	2003	66,897	66,897		66,897	66,897
o15m	2004	71,465	71,465	146,374	71,465	71,465
o15m	2005	146,937	146,937	333,983	146,937	146,937
o15m	2006	119,156	119,156		119,156	119,156
o15m	2007	113,730	113,730	180,784	113,730	113,730
o15m	2008	122,687	122,687	100,536	122,687	122,687
Total	2000	15,468	15,468		15,468	15,468
Total	2001	30,065	30,065		30,065	30,065
Total	2002	33,723	33,723		33,723	33,723
Total	2003	66,897	66,897		66,897	66,897
Total	2004	71,465	71,465		71,465	71,465
Total	2005	146,937	146,937		146,937	146,937
Total	2006	119,156	119,156		119,156	119,156
Total	2007	113,730	113,730		113,730	113,730
Total	2008	122,687	122,687		122,687	122,687

Table 4.2.1.8.2 Effort (KWdays) by gear, member state and vessel size group Western Waters Area CECAF 34.2.0

Area: 34.2.0, o15m vessel lengths

Gear	Year	Total	NonDeepTotal	POR Total	POR Excl. Deep
LONGLINE	2000	15,468	15,468	15,468	15,468
LONGLINE	2001	30,065	30,065	30,065	30,065
LONGLINE	2002	33,723	33,723	33,723	33,723
LONGLINE	2003	66,897	66,897	66,897	66,897
LONGLINE	2004	71,465	71,465	71,465	71,465
LONGLINE	2005	146,937	146,937	146,937	146,937
LONGLINE	2006	119,156	119,156	119,156	119,156
LONGLINE	2007	113,730	113,730	113,730	113,730
LONGLINE	2008	122,687	122,687	122,687	122,687

Area: 34.2.0, All vessel lengths

Gear	Year	Total	NonDeepTotal	POR Total	POR Excl. Deep
LONGLINE	2000	15,468	15,468	15,468	15,468
LONGLINE	2001	30,065	30,065	30,065	30,065
LONGLINE	2002	33,723	33,723	33,723	33,723
LONGLINE	2003	66,897	66,897	66,897	66,897
LONGLINE	2004	71,465	71,465	71,465	71,465
LONGLINE	2005	146,937	146,937	146,937	146,937
LONGLINE	2006	119,156	119,156	119,156	119,156
LONGLINE	2007	113,730	113,730	113,730	113,730
LONGLINE	2008	122,687	122,687	122,687	122,687

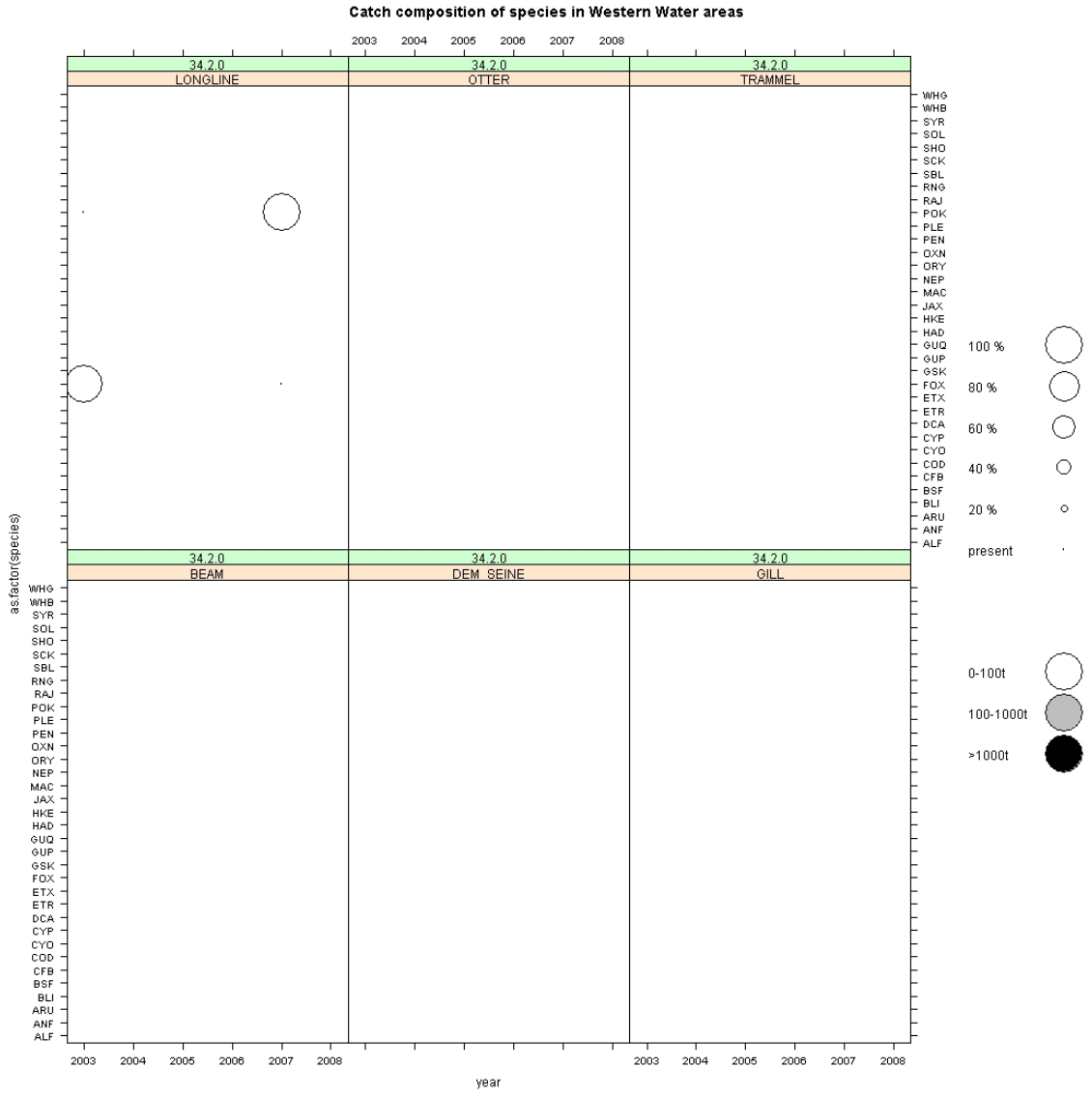

Figure 4.2.1.8.1 Catch composition by gear (countries combined) Western waters area CECAF 34.2.0. Size of circles represents relative contribution to catch, shading indicates quantity.

4.2.2. Scallops

4.2.2.1. Western Waters Area V-VI

Ireland and the UK recorded highest scallop effort in area V –VI (with a small amount by France)(Table 4.2.2.1.1). Most of this effort was by the larger vessel category. Overall effort has roughly halved over the time period 2000 to 2008.

Table 4.2.2.1.1 Scallop Effort (KWdays) by member state and vessel size group Western Waters Area V-VI

Area: V-VI, scallop effort

			FRA		IRL		UK	
					5,766		1,974,425	
Length	Year	Total	Reported	Total	Reported	Total	Reported	Total
o10t15m	2000	274,302				7,649		266,653
o10t15m	2001	289,905				13,630		276,275
o10t15m	2002	263,237				9,954		253,283
o10t15m	2003	249,410		1,005		680		247,725
o10t15m	2004	275,857		358		397		275,102
o10t15m	2005	252,840				397		252,443
o10t15m	2006	182,168				556		181,612
o10t15m	2007	132,651				884		131,767
o10t15m	2008	169,174						169,174
o15m	2000	1,707,425				515		1,706,910
o15m	2001	1,747,791				8,935		1,738,856
o15m	2002	1,982,638				24,050		1,958,588
o15m	2003	1,700,637				10,260		1,690,377
o15m	2004	1,407,639				5,804	140,141	1,401,835
o15m	2005	1,257,717					89,295	1,257,717
o15m	2006	979,504					100,577	979,504
o15m	2007	778,879				19,404	25,325	759,475
o15m	2008	906,353				7,938	892,549	898,415
Total	2000	1,981,727				8,164		1,973,563
Total	2001	2,037,696				22,565		2,015,131
Total	2002	2,245,875				34,004		2,211,871
Total	2003	1,950,047		1,005		10,940		1,938,102
Total	2004	1,683,496		358		6,201		1,676,937
Total	2005	1,510,557				397		1,510,160
Total	2006	1,161,672				556		1,161,116
Total	2007	911,530				20,288		891,242
Total	2008	1,075,527				7,938		1,067,589

4.2.2.2. Western Waters Area VII

France, Ireland and the UK recorded highest scallop effort in area VII (with smaller amounts by Netherlands and Belgium, Table 4.2.2.2.1). Most of this effort was by the larger vessel category although France Ireland and UK also recorded smaller vessel scallop activity, particularly the UK. Overall effort has remained fairly stable over the time period 2000 to 2008 with decreases in Irish effort, compensated by increases in French effort.

Table 4.2.2.2.1 Scallop Effort (KWdays) by member state and vessel size group Western Waters Area VII

Area: VII, scallop effort

			BEL		FRA		IRL		NED		UK	
			354066		7447932		525,012		155157		3,315,619	
Length	Year	Total	Reported	Total	Reported	Total	Reported	Total	Reported	Total	Reported	Total
o10t15m	2000	1,009,335				169,510		10,671				829,154
o10t15m	2001	1,013,178				274,015		18,238				720,925
o10t15m	2002	960,795				303,463		5,518				651,814
o10t15m	2003	911,760				333,394		19,763				558,603
o10t15m	2004	948,701				351,313		16,170				581,218
o10t15m	2005	1,276,721				463,796		2,686				810,239
o10t15m	2006	1,091,063				259,514		21,260				810,289
o10t15m	2007	1,246,095				398,080		37,573				810,442
o10t15m	2008	1,186,796				516,146		53,216				617,434
o15m	2000	4,454,687				543,587		828,345		20,957		3,061,798
o15m	2001	4,337,808				605,669		618,445		75,316		3,038,378
o15m	2002	4,269,935				690,298		608,505		80,977		2,890,155
o15m	2003	4,941,371				763,575		1,106,818		275,638		2,795,340
o15m	2004	4,995,211	327,704			771,341		1,320,144	169,304	225,086		2,678,640
o15m	2005	4,692,669	320,953		2,871,651	839,598	508,531	641,412	202,584	258,102	2,379,301	2,953,557
o15m	2006	4,044,071	342,416		3,189,482	594,334	137,776	191,929	218,278	250,096	2,594,619	3,007,712
o15m	2007	4,453,976	290,909	1,882	2,352,887	656,205	248,392	328,971	226,981	276,192	1,798,252	3,190,726
o15m	2008	4,735,454	288,908	83,523	2,348,430	962,005	190,351	249,331	252,751	293,300	2,877,438	3,147,295
Total	2000	5,464,022				713,097		839,016		20,957		3,890,952
Total	2001	5,350,986				879,684		636,683		75,316		3,759,303
Total	2002	5,230,730				993,761		614,023		80,977		3,541,969
Total	2003	5,853,131				1,096,969		1,126,581		275,638		3,353,943
Total	2004	5,943,912				1,122,654		1,336,314		225,086		3,259,858
Total	2005	5,969,390				1,303,394		644,098		258,102		3,763,796
Total	2006	5,135,134				853,848		213,189		250,096		3,818,001
Total	2007	5,700,071		1,882		1,054,285		366,544		276,192		4,001,168
Total	2008	5,922,250		83,523		1,478,151		302,547		293,300		3,764,729

4.2.2.3. Western Waters Area VIII

Only relatively small amounts of scallop (dredge) effort occurred in area VIII (Table 4.2.2.3.1) mainly by France in the smaller vessel categories and by Spain in the larger vessels. Spanish effort is uncertain however. There is no evidence of trends over the time period 2000 to 2008.

Table 4.2.2.3.1 Scallop Effort (KWdays) by member state and vessel size group Western Waters Area VIII

Area: VIII, scallop effort

			SPN		FRA		IRL		UK	
			170000		901250					
Length	Year	Total	Reported	Total	Reported	Total	Reported	Total	Reported	Total
o10t15m	2000	16,886				16,886				
o10t15m	2001	45,642				45,422				220
o10t15m	2002	44,225				43,818				407
o10t15m	2003	33,033				33,033				
o10t15m	2004	23,262				23,262				
o10t15m	2005	23,355				23,355				
o10t15m	2006	17,258				17,258				
o10t15m	2007	22,788				22,788				
o10t15m	2008	70,378				70,378				
o15m	2000	912				912				
o15m	2001	29,491				184				29,307
o15m	2002									
o15m	2003	17,804						17,804		
o15m	2004	1,303	137,718			1,303				
o15m	2005		119,517		1,061					
o15m	2006		146,094		444					
o15m	2007	472	128,222		1,325	472				
o15m	2008		133,280							
Total	2000	17,798				17,798				
Total	2001	75,133				45,606				29,527
Total	2002	44,225				43,818				407
Total	2003	50,837				33,033		17,804		
Total	2004	24,565				24,565				
Total	2005	23,355				23,355				
Total	2006	17,258				17,258				
Total	2007	23,260				23,260				
Total	2008	70,378				70,378				

4.2.2.4. Western Waters Area IX

Only relatively small amounts of scallop (dredge) effort occurred in area XI by Portugal and by Spain (Table 4.2.2.4.1). Spanish effort was confined to larger vessels (although figures are considered uncertain) while Portugal recorded scallop effort in both categories of vessel. There is no evidence of trends over the time period 2000 to 2008.

Table 4.2.2.4.1 Scallop Effort (KWdays) by member state and vessel size group Western Waters Area IX

Area: IX, scallop effort

			SPN		POR	
			210000			
Length	Year	Total	Reported	Total	Reported	Total
o10t15m	2000					
o10t15m	2001					
o10t15m	2002					
o10t15m	2003					
o10t15m	2004					
o10t15m	2005					
o10t15m	2006	9,629				9,629
o10t15m	2007	118				118
o10t15m	2008	4,746				4,746
o15m	2000					
o15m	2001					
o15m	2002					
o15m	2003	4,868				4,868
o15m	2004	6,666	154,346			6,666
o15m	2005	5,462	130,879	1,187		4,275
o15m	2006	24,471	165,001			24,471
o15m	2007	12,730	157,342			12,730
o15m	2008	2,955	153,930	202		2,753
Total	2000					
Total	2001					
Total	2002					
Total	2003	4,868				4,868
Total	2004	6,666				6,666
Total	2005	5,462		1,187		4,275
Total	2006	34,100				34,100
Total	2007	12,848				12,848
Total	2008	7,701		202		7,499

4.2.2.5. Western Waters Area X

No scallop (dredge) effort

4.2.2.6. Western Waters CECAF 34.1.1

No scallop (dredge) effort

4.2.2.7. Western Waters CECAF 34.1.2

No scallop (dredge) effort

4.2.2.8. Western Waters CECAF 34.2.0

No scallop (dredge) effort

4.2.3. Crab and spider crab

4.2.3.1. Western Waters Area V-VI

Countries recording crab (pot) effort in V and VI were Germany, Ireland and the UK (Table 4.2.3.1.1). Germany recorded a very small amount of effort. Ireland and UK activity was by both size categories of vessel and in the UK most effort was by the small vessel category. For the purpose of categorising 'crab' effort, information on 'pots' was used from the database. This approach includes pot effort targeted at other species and in this area very significant creel fisheries take place for *Nephrops*. Overall effort has increased over the time period.

Table 4.2.3.1.1 Crab Effort (KWdays) by member state and vessel size group Western Waters Area V-VI

Area: V-VI, crab effort

			GER		IRL		UK	
					465,000		702,292	
Length	Year	Total	Reported	Total	Reported	Total	Reported	Total
o10t15m	2000	1,314,030						1,314,030
o10t15m	2001	1,411,219				10,556		1,400,663
o10t15m	2002	1,186,204				11,542		1,174,662
o10t15m	2003	1,322,535				37,718		1,284,817
o10t15m	2004	1,458,088				36,838		1,421,250
o10t15m	2005	1,551,016				19,007		1,532,009
o10t15m	2006	1,720,854				125,179		1,595,675
o10t15m	2007	2,078,459				203,121		1,875,338
o10t15m	2008	1,982,678				157,713		1,824,965
o15m	2000	874,387				358,415		515,972
o15m	2001	1,177,378				564,982		612,396
o15m	2002	1,451,006		21,168		568,652		861,186
o15m	2003	1,467,548		24,696		599,881		842,971
o15m	2004	1,270,192		49,833		592,180	733,736	628,179
o15m	2005	1,255,004		55,125	601,613	561,812	430,338	638,067
o15m	2006	1,191,338		98,384	465,175	427,993	556,487	664,961
o15m	2007	1,611,764		92,176	452,146	450,532	526,608	1,069,056
o15m	2008	1,047,927		34,398	355,190	363,223	521,914	650,306
Total	2000	2,188,417				358,415		1,830,002
Total	2001	2,588,597				575,538		2,013,059
Total	2002	2,637,210		21,168		580,194		2,035,848
Total	2003	2,790,083		24,696		637,599		2,127,788
Total	2004	2,728,280		49,833		629,018		2,049,429
Total	2005	2,806,020		55,125		580,819		2,170,076
Total	2006	2,912,192		98,384		553,172		2,260,636
Total	2007	3,690,223		92,176		653,653		2,944,394
Total	2008	3,030,605		34,398		520,936		2,475,271

4.2.3.2. Western Waters Area VII

Countries recording crab (pot) effort in area VII were Germany, France , Ireland and the UK (Table 4.2.3.2.1). Germany and France recorded very small amounts of effort. Ireland and UK activity was by both size categories of vessel and, as in area VI, UK effort by the small vessel category was particularly evident. Irish effort by the smaller category of vessels increased by six times over the time period whereas effort by its larger vessels remained fairly constant. The general trend in overall effort has been upward over the time period.

Table 4.2.3.2.1 Crab Effort (KWdays) by member state and vessel size group Western Waters Area VII

Area: VII, crab effort

			GER		FRA		IRL		UK	
					1946719		40,960		543,366	
Length	Year	Total	Reported	Total	Reported	Total	Reported	Total	Reported	Total
o10t15m	2000	1,292,722				12,695		66,827		1,213,200
o10t15m	2001	1,391,466				16,852		76,572		1,298,042
o10t15m	2002	1,505,747				13,362		95,186		1,397,199
o10t15m	2003	1,624,505				7,693		42,353		1,574,459
o10t15m	2004	1,603,016				12,490		68,621		1,521,905
o10t15m	2005	1,845,775				14,933		169,720		1,661,122
o10t15m	2006	1,677,158				5,672		227,655		1,443,831
o10t15m	2007	1,962,958				5,629		491,954		1,465,375
o10t15m	2008	1,832,457				3,760		426,923		1,401,774
o15m	2000	686,038				208		29,274		656,556
o15m	2001	765,190				92		44,134		720,964
o15m	2002	750,951		48,951				79,530		622,470
o15m	2003	845,989		79,821				80,185		685,983
o15m	2004	841,871		22,932		2,299		58,839		757,801
o15m	2005	833,073		67,473	363,286	4,292	25,586	90,154	436,805	671,154
o15m	2006	803,399		37,763	430,440	355	2,753	81,390	475,640	683,891
o15m	2007	904,035		49,735	389,600	1,192	4,360	58,054	306,632	795,054
o15m	2008	954,269		33,957	343,652		2,649	50,397	549,215	869,915
Total	2000	1,978,760				12,903		96,101		1,869,756
Total	2001	2,156,656				16,944		120,706		2,019,006
Total	2002	2,256,698		48,951		13,362		174,716		2,019,669
Total	2003	2,470,494		79,821		7,693		122,538		2,260,442
Total	2004	2,444,887		22,932		14,789		127,460		2,279,706
Total	2005	2,678,848		67,473		19,225		259,874		2,332,276
Total	2006	2,480,557		37,763		6,027		309,045		2,127,722
Total	2007	2,866,993		49,735		6,821		550,008		2,260,429
Total	2008	2,786,726		33,957		3,760		477,320		2,271,689

4.2.3.3. Western Waters Area VIII

Only small amounts of effort were recorded for this area. Five member states were involved in crab fisheries but only in a very sporadic and patchy fashion (Table 4.2.3.3.1). France and Portugal expended very little effort according to that submitted to the database (although France apparently reported very high values to The EU. The UK recorded small amounts of effort in two years. Spain and Germany exhibited the most consistent effort since 2002.

Table 4.2.3.3.1 Crab Effort (KWdays) by member state and vessel size group Western Waters Area VIII

Area: VIII, crab effort

			GER		SPN		FRA		POR		UK	
					500000		518763					
Length	Year	Total	Reported	Total	Reported	Total	Reported	Total	Reported	Total	Reported	Total
o10t15m	2000	290						290				
o10t15m	2001											
o10t15m	2002	275						275				
o10t15m	2003	301						301				
o10t15m	2004	27						27				
o10t15m	2005											
o10t15m	2006	254						254				
o10t15m	2007	147						147				
o10t15m	2008	2,938						2,938				
o15m	2000											
o15m	2001											
o15m	2002	64,006				64,006						
o15m	2003	108,307		24,255		83,217				835		
o15m	2004	174,043		37,485	416,250	125,520				853		10,185
o15m	2005	96,722		2,646	418,801	91,627	252,078	1,596		853		
o15m	2006	112,783		29,507	448,836	82,781	458,994	495				
o15m	2007	97,142		45,482	395,518	51,165	253,942	495				
o15m	2008	109,038		33,957	478,896	59,849	249,484					15,232
Total	2000	290						290				
Total	2001											
Total	2002	64,281				64,006		275				
Total	2003	108,608		24,255		83,217		301		835		
Total	2004	174,070		37,485		125,520		27		853		10,185
Total	2005	96,722		2,646		91,627		1,596		853		
Total	2006	113,037		29,507		82,781		749				
Total	2007	97,289		45,482		51,165		642				
Total	2008	111,976		33,957		59,849		2,938				15,232

4.2.3.4. Western Waters Area IX

Countries recording crab (pot) effort area IX were mainly Portugal and Spain (Table 4.2.3.4.1). Portugal used effort in both size categories of vessel, the larger vessels expending about twice as much as the o10t15m group. In both cases, the trend over the time series has been upward. Spanish effort has apparently been more stable although the data should be treated with caution owing to uncertainties in its completeness. Overall effort has increased over the time period by about 10 times.

Table 4.2.3.4.1 Crab Effort (KWdays) by member state and vessel size group Western Waters Area IX

Area: IX, crab effort

			GER		SPN		POR		UK	
					750000					
Length	Year	Total	Reported	Total	Reported	Total	Reported	Total	Reported	Total
o10t15m	2000									
o10t15m	2001	9,346						9,346		
o10t15m	2002	8,989						8,989		
o10t15m	2003	23,463						23,463		
o10t15m	2004	27,171						27,171		
o10t15m	2005	252,310						252,310		
o10t15m	2006	203,265						203,265		
o10t15m	2007	287,388						287,388		
o10t15m	2008	344,514						344,514		
o15m	2000	114,757						114,757		
o15m	2001	132,020						132,020		
o15m	2002	203,739				104,255		99,484		
o15m	2003	399,170				82,559		316,611		
o15m	2004	479,070			590,931	125,788		353,282		
o15m	2005	532,657			533,750	108,535		424,122		
o15m	2006	474,184			637,327	106,811		364,237		3,136
o15m	2007	607,428		7,272	606,892	110,900		463,055		26,201
o15m	2008	770,253			567,057	87,346		682,907		
Total	2000	114,757						114,757		
Total	2001	141,366						141,366		
Total	2002	212,728				104,255		108,473		
Total	2003	422,633				82,559		340,074		
Total	2004	506,241				125,788		380,453		
Total	2005	784,967				108,535		676,432		
Total	2006	677,449				106,811		567,502		3,136
Total	2007	894,816		7,272		110,900		750,443		26,201
Total	2008	1,114,767				87,346		1,027,421		

4.2.3.5. Western Waters Area X

Portugal recorded a very small amount of effort from this area (Table 4.2.3.5.1)

Table 4.2.3.5.1 Crab Effort (KWdays) by member state and vessel size group Western Waters Area X

Area: X, crab effort

			POR	
Length	Year	Total	Reported	Total
o10t15m	2000			
o10t15m	2001			
o10t15m	2002			
o10t15m	2003			
o10t15m	2004			
o10t15m	2005	835		835
o10t15m	2006			
o10t15m	2007			
o10t15m	2008			
o15m	2000			
o15m	2001			
o15m	2002			
o15m	2003			
o15m	2004			
o15m	2005			
o15m	2006			
o15m	2007			
o15m	2008	5,148		5,148
Total	2000			
Total	2001			
Total	2002			
Total	2003			
Total	2004			
Total	2005	835		835
Total	2006			
Total	2007			
Total	2008	5,148		5,148

4.2.3.6. Western Waters Area CECAF 34.1.1

No effort.

4.2.3.7. Western Waters Area CECAF 34.1.2

Spain officially reported effort from this area but this was not apparent in the submission to the Study Group (Table 4.2.3.7.1)

Table 4.2.3.7.1 Crab Effort (KWdays) by member state and vessel size group Western Waters Area CECAF 34.1.2

Area: 34.1.2, crab effort

Length	Year	Total	SPN 1670000 Reported	Total
o10t15m	2000			
o10t15m	2001			
o10t15m	2002			
o10t15m	2003			
o10t15m	2004			
o10t15m	2005			
o10t15m	2006			
o10t15m	2007			
o10t15m	2008			
o15m	2000			
o15m	2001			
o15m	2002			
o15m	2003			
o15m	2004		1,342,783	
o15m	2005		1,368,776	
o15m	2006		1,417,593	
o15m	2007		1,220,319	
o15m	2008		1,362,720	
Total	2000			
Total	2001			
Total	2002			
Total	2003			
Total	2004			
Total	2005			
Total	2006			
Total	2007			
Total	2008			

4.2.3.8. Western Waters Area CECAF 34.2.0

No Effort.

4.2.4. Effort not associated with above species groups (None)

4.2.4.1. Western Waters Area V-VI

Substantial amounts of effort not associated with the Western waters effort groups were recorded by Ireland , Netherlands and the UK (Table 4.2.4.1.1). Germany also recorded a significant amount, particularly since 2003 and Denmark and France contributed smaller amounts. Most of this effort is by larger vessels. Irish and UK effort has declined but there is little evidence of long term change in the other nations.

Table 4.2.4.1.1 'None' Effort (KWdays) by member state and vessel size group Western Waters Area V-VI

Area: V-VI, none effort

			DEN		GER		FRA		IRL		NED		UK	
Length	Year	Total	Reported	Total	Reported	Total	Reported	Total	Reported	Total	Reported	Total	Reported	Total
o10t15m	2000	67,270								16,394				50,876
o10t15m	2001	62,767								5,671				57,096
o10t15m	2002	80,006								20,155				59,851
o10t15m	2003	52,274								172				52,102
o10t15m	2004	26,903												26,903
o10t15m	2005	42,374								320				42,054
o10t15m	2006	55,240								4,320				50,920
o10t15m	2007	63,793								2,512				61,281
o10t15m	2008	50,031								2,310				47,721
o15m	2000	10,731,757		379,766		666,036				2,159,868		3,721,931		3,804,156
o15m	2001	11,167,690		172,836		774,479		19,320		1,418,939		4,446,391		4,335,725
o15m	2002	11,716,367		40,141		590,791		94,208		2,164,888		3,504,130		5,322,209
o15m	2003	13,536,272		198,086		962,096		30,423		2,528,776		3,337,996		6,478,895
o15m	2004	17,428,198		400,491		787,112		17,664		2,702,694		6,842,058		6,678,179
o15m	2005	14,329,174		381,933		815,589		25,024		1,852,351		6,160,613		5,093,664
o15m	2006	11,790,482		876,623		1,229,430		37,425		1,659,222		4,464,400		3,523,382
o15m	2007	10,788,328		306,218		1,187,097		38,272		1,334,831		4,556,807		3,365,103
o15m	2008	8,494,808		107,994		704,950				1,482,332		3,873,076		2,326,456
Total	2000	10,799,027		379,766		666,036				2,176,262		3,721,931		3,855,032
Total	2001	11,230,457		172,836		774,479		19,320		1,424,610		4,446,391		4,392,821
Total	2002	11,796,373		40,141		590,791		94,208		2,185,043		3,504,130		5,382,060
Total	2003	13,588,546		198,086		962,096		30,423		2,528,948		3,337,996		6,530,997
Total	2004	17,455,101		400,491		787,112		17,664		2,702,694		6,842,058		6,705,082
Total	2005	14,371,548		381,933		815,589		25,024		1,852,671		6,160,613		5,135,718
Total	2006	11,845,722		876,623		1,229,430		37,425		1,663,542		4,464,400		3,574,302
Total	2007	10,852,121		306,218		1,187,097		38,272		1,337,343		4,556,807		3,426,384
Total	2008	8,544,839		107,994		704,950				1,484,642		3,873,076		2,374,177

4.2.4.2. Western Waters Area VII

Substantial amounts of effort not associated with the Western waters effort groups were recorded by Germany, Ireland , Netherlands and the UK (Table 4.2.4.2.1). France, Denmark and Spain also recorded a smaller amounts, although the Spanish data appear again appear to be incomplete and only commence in 2005. Most of this 'non-associated' effort is by larger vessels. There is little evidence of long term trends in the effort presented.

Table 4.2.4.2.1 'None' Effort (KWdays) by member state and vessel size group Western Waters Area VII

Area: VII, none effort

			DEN		GER		SPN		FRA		IRL		NED		UK	
Length	Year	Total	Reported	Total	Reported	Total	Reported	Total	Reported	Total	Reported	Total	Reported	Total	Reported	Total
o10t15m	2000	25,012								4,397		716				19,899
o10t15m	2001	29,409								9,315		8,378				11,716
o10t15m	2002	33,051								22,728		3,999				6,324
o10t15m	2003	236,707								221,602		3,430				11,675
o10t15m	2004	191,727								161,839		5,800				24,088
o10t15m	2005	134,722								113,353		3,271				18,098
o10t15m	2006	68,197								36,152		9,149				22,896
o10t15m	2007	83,899								21,059		6,974				55,866
o10t15m	2008	136,427								44,479		7,547				84,401
o15m	2000	16,220,899		482,734		1,496,257				269,642		2,728,624		9,513,261		1,730,381
o15m	2001	14,744,553		342,379		1,215,613				234,277		1,955,365		8,289,561		2,707,358
o15m	2002	13,818,915		386,361		1,370,467				312,245		2,665,722		6,584,056		2,500,064
o15m	2003	13,350,184		165,414		1,355,629				261,134		1,706,383		7,540,552		2,321,072
o15m	2004	14,478,597		329,954		1,492,907				191,653		2,518,813		7,191,820		2,753,450
o15m	2005	13,032,898		519,088		1,189,069		281,744		101,866		1,917,777		6,578,518		2,444,836
o15m	2006	11,040,984		433,696		1,079,129		174,828		118,793		1,496,721		5,960,915		1,776,902
o15m	2007	13,168,716		894,249		1,188,625		327,803		78,616		2,179,917		5,866,175		2,633,331
o15m	2008	14,556,328		388,076		1,359,932		353,670		79,531		2,218,992		7,552,178		2,603,949
Total	2000	16,245,911		482,734		1,496,257				274,039		2,729,340		9,513,261		1,750,280
Total	2001	14,773,962		342,379		1,215,613				243,592		1,963,743		8,289,561		2,719,074
Total	2002	13,851,966		386,361		1,370,467				334,973		2,669,721		6,584,056		2,506,388
Total	2003	13,586,891		165,414		1,355,629				482,736		1,709,813		7,540,552		2,332,747
Total	2004	14,670,324		329,954		1,492,907				353,492		2,524,613		7,191,820		2,777,538
Total	2005	13,167,620		519,088		1,189,069		281,744		215,219		1,921,048		6,578,518		2,462,934
Total	2006	11,109,181		433,696		1,079,129		174,828		154,945		1,505,870		5,960,915		1,799,798
Total	2007	13,252,615		894,249		1,188,625		327,803		99,675		2,186,891		5,866,175		2,689,197
Total	2008	14,692,755		388,076		1,359,932		353,670		124,010		2,226,539		7,552,178		2,688,350

4.2.4.3. Western Waters Area VIII

Substantial amounts of effort not associated with the Western waters effort groups were recorded by Netherlands and Spain (Table 4.2.4.3.1). Denmark, Germany, France, Ireland and UK also recorded smaller amounts. Most of effort is by larger vessels. Netherlands effort and to some extent Irish effort has declined since the start of the series but there is little evidence amongst other nations of long term trends in the effort presented.

Table 4.2.4.3.1 'None' Effort (KWdays) by member state and vessel size group Western Waters Area VIII

Area: VIII, none effort

			DEN		GER		SPN		FRA		IRL		NED		POR		UK	
Length	Year	Total	Reported	Total	Reported	Total	Reported	Total	Reported	Total	Reported	Total	Reported	Total	Reported	Total	Reported	Total
o10t15m	2000	479								479								
o10t15m	2001	8,416								2,592		5,824						
o10t15m	2002	7,568								624		6,944						
o10t15m	2003	2,771								2,771								
o10t15m	2004	9,969								9,969								
o10t15m	2005	12,376								12,376								
o10t15m	2006	5,296								5,296								
o10t15m	2007	14,007								14,007								
o10t15m	2008	91,637								91,637								
o15m	2000	3,194,442		86,110		246,685				50,796		357,375		2,322,788				130,688
o15m	2001	4,126,437		26,710		323,841				22,500		99,474		3,585,045				68,867
o15m	2002	4,227,332				207,308		1,576,046		30,815		206,508		1,885,345				321,310
o15m	2003	2,541,753				51,022		1,146,462		66,112		245,290		847,751				185,116
o15m	2004	2,499,559				122,593		1,548,553		31,433		369,230		203,153				224,597
o15m	2005	2,376,272				298,693		1,023,639		43,806		306,708		536,805				166,621
o15m	2006	1,952,745		38,027		183,966		916,986		110,956		137,196		472,316		853		92,445
o15m	2007	1,623,998		174,671				1,066,869		139,675		100,377		106,118				36,288
o15m	2008	2,423,684		178,275		85,325		1,545,207		21,363		22,418		403,896				167,200
Total	2000	3,194,921		86,110		246,685				51,275		357,375		2,322,788				130,688
Total	2001	4,134,853		26,710		323,841				25,092		105,298		3,585,045				68,867
Total	2002	4,234,900				207,308		1,576,046		31,439		213,452		1,885,345				321,310
Total	2003	2,544,524				51,022		1,146,462		68,883		245,290		847,751				185,116
Total	2004	2,509,528				122,593		1,548,553		41,402		369,230		203,153				224,597
Total	2005	2,388,648				298,693		1,023,639		56,182		306,708		536,805				166,621
Total	2006	1,958,041		38,027		183,966		916,986		116,252		137,196		472,316		853		92,445
Total	2007	1,638,005		174,671				1,066,869		153,682		100,377		106,118				36,288
Total	2008	2,515,321		178,275		85,325		1,545,207		113,000		22,418		403,896				167,200

4.2.4.4. Western Waters Area IX

Substantial amounts of effort not associated with the Western waters effort groups were recorded by Spain and Portugal only (Table 4.2.4.4.1). Almost all of this effort is by larger vessels. Spanish effort has remained fairly constant (although this may be an incomplete picture and is anyway only presented from 2002) while Portuguese effort increased over the time series.

Table 4.2.4.4.1 'None' Effort (KWdays) by member state and vessel size group Western Waters Area IX

Area: IX, none effort

			SPN		POR	
Length	Year	Total	Reported	Total	Reported	Total
o10t15m	2000					
o10t15m	2001					
o10t15m	2002					
o10t15m	2003	8,280				8,280
o10t15m	2004					
o10t15m	2005	25,969				25,969
o10t15m	2006	36,795				36,795
o10t15m	2007	19,633				19,633
o10t15m	2008	57,364				57,364
o15m	2000	367,613				367,613
o15m	2001	489,066				489,066
o15m	2002	1,730,004		1,333,900		396,104
o15m	2003	2,079,732		1,082,416		997,316
o15m	2004	2,277,666		1,324,157		953,509
o15m	2005	2,381,978		1,175,070		1,206,908
o15m	2006	2,253,000		1,099,883		1,153,117
o15m	2007	2,347,158		1,333,961		1,013,197
o15m	2008	2,181,902		1,179,651		1,002,251
Total	2000	367,613				367,613
Total	2001	489,066				489,066
Total	2002	1,730,004		1,333,900		396,104
Total	2003	2,088,012		1,082,416		1,005,596
Total	2004	2,277,666		1,324,157		953,509
Total	2005	2,407,947		1,175,070		1,232,877
Total	2006	2,289,795		1,099,883		1,189,912
Total	2007	2,366,791		1,333,961		1,032,830
Total	2008	2,239,266		1,179,651		1,059,615

4.2.4.5. Western Waters Area X

No effort.

4.2.4.6. Western Waters CECAF 34.1.1

No effort.

4.2.4.7. Western Waters CECAF 34.1.2

No effort.

4.2.4.1. Western Waters CECAF 34.2.0

No effort.

4.2.5. Fishing effort in BSA

4.2.5.1. Demersal

Effort and catch composition

Table 4.2.5.1.1 shows effort by member state and vessel size from 2000 to 2008. For most countries the majority of the effort was confined to the larger vessel size class (over 15m). France and UK recorded very small amounts of small vessel effort while Ireland recorded increasing amounts of effort by this category but still relatively small compared to the larger vessels. Most of the effort was by trawl and gill nets with smaller amounts by longline and trammel nets.

Belgium, Germany and the Netherlands submitted small amounts of information in the large vessels and Spain officially reported data to the Commission for 2004 -2008 but did not submit any to the database. Most effort was exerted by France, Ireland and UK. The first two of these countries showed a pattern which peaked in the early 2000s and then declined slightly, while for the UK, the trend was generally downward. In the larger vessel sizes a variety of gears were used. Otter trawling (Table 4.2.5.1.2) was particularly important but beam trawling by Belgium and gill netting by UK and France was also significant. Ireland carried out significant fishing with a variety of gears and only longlines and trammel nets were insignificant.

Catch composition in the BSA (Figure 4.2.5.1.1) varied markedly in the different gears reflecting a wide variety of fisheries in the area. Longline and gillnet was dominated by hake catches. Trammel net took a variety of species with anglerfish the most important while beam trawls also took angler fish along with a number of other benthic species. Otter trawls comprised a mixed species catch as did demersal seine and whiting were particularly important in the latter.

Table 4.2.5.1.1 Effort (KWdays) by member state and vessel size group Western Waters Area BSA

Area: BSA, dem effort

				BEL			GER			SPN			FRA		
					135,432			8,326			5,642,215			9,559,653	
Length	Year	Total	NonDeepTotal	Reported	Total	Excl. Deep	Reported	Total	Excl. Deep	Reported	Total	Excl. Deep	Reported	Total	Excl. Deep
o10t15m	2000	265,644	265,644												
o10t15m	2001	249,990	249,990											1,083	1,083
o10t15m	2002	299,929	299,929												
o10t15m	2003	428,391	428,391											13,062	13,062
o10t15m	2004	421,501	421,501											1,747	1,747
o10t15m	2005	381,031	381,031											4,523	4,523
o10t15m	2006	438,002	438,002											5,437	5,437
o10t15m	2007	525,431	525,431											3,021	3,021
o10t15m	2008	585,415	585,415											24,525	24,525
o15m	2000	20,760,229	20,760,229					24,420	24,420					9,909,712	9,909,712
o15m	2001	22,432,602	22,432,602					5,404	5,404					12,475,406	12,475,406
o15m	2002	25,451,688	25,451,688					7,514	7,514					14,561,295	14,561,295
o15m	2003	25,899,780	25,899,780		52,439	52,439		32,698	32,698					14,052,490	14,052,490
o15m	2004	22,257,082	22,257,082		17,947	17,947		38,186	38,186					11,784,116	11,784,116
o15m	2005	21,189,047	21,189,047		39,650	39,650		18,512	18,512					11,494,055	11,494,055
o15m	2006	19,209,483	19,209,483		14,077	14,077								11,225,251	11,225,251
o15m	2007	18,950,030	18,950,030		13,279	13,279		4,862	4,862					10,809,793	10,809,793
o15m	2008	15,829,211	15,829,211		10,056	10,056								8,307,868	8,307,868
Total	2000	21,025,873	21,025,873					24,420	24,420					9,909,712	9,909,712
Total	2001	22,682,592	22,682,592					5,404	5,404					12,476,489	12,476,489
Total	2002	25,751,617	25,751,617					7,514	7,514					14,561,295	14,561,295
Total	2003	26,328,171	26,328,171		52,439	52,439		32,698	32,698					14,065,552	14,065,552
Total	2004	22,678,583	22,678,583	10,926	17,947	17,947		38,186	38,186	4,848,314				11,785,863	11,785,863
Total	2005	21,570,078	21,570,078	7,634	39,650	39,650	7,700	18,512	18,512	5,168,520			1,973,796	11,498,578	11,498,578
Total	2006	19,647,485	19,647,485	3,431	14,077	14,077	404			5,308,604			3,684,364	11,230,688	11,230,688
Total	2007	19,475,461	19,475,461	7,142	13,279	13,279		4,862	4,862	5,257,754			2,020,939	10,812,814	10,812,814
Total	2008	16,414,626	16,414,626	8,779	10,056	10,056				5,235,975			1,444,971	8,332,393	8,332,393

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CONT.

	IRL			NED			UK			gsa
	7,154,490						3,061,485			dem-BSA--
Reported	Total	Excl. Deep	Reported	Total	Excl. Deep	Reported	Total	Excl. Deep	
	258,994	258,994					6,650	6,650	dem-BSA-o10t15m-2000
	245,038	245,038					3,869	3,869	dem-BSA-o10t15m-2001
	290,339	290,339					9,590	9,590	dem-BSA-o10t15m-2002
	388,188	388,188					27,141	27,141	dem-BSA-o10t15m-2003
	393,117	393,117					26,637	26,637	dem-BSA-o10t15m-2004
	358,449	358,449					18,059	18,059	dem-BSA-o10t15m-2005
	409,470	409,470					23,095	23,095	dem-BSA-o10t15m-2006
	514,677	514,677					7,733	7,733	dem-BSA-o10t15m-2007
	552,997	552,997					7,893	7,893	dem-BSA-o10t15m-2008
	6,818,416	6,818,416					4,007,681	4,007,681	dem-BSA-o15m-2000
	7,241,840	7,241,840		8,796	8,796		2,701,156	2,701,156	dem-BSA-o15m-2001
	8,490,026	8,490,026		734	734		2,392,119	2,392,119	dem-BSA-o15m-2002
	9,802,827	9,802,827		19,680	19,680		1,939,646	1,939,646	dem-BSA-o15m-2003
	8,266,844	8,266,844					2,149,989	2,149,989	dem-BSA-o15m-2004
	7,937,526	7,937,526					1,699,304	1,699,304	dem-BSA-o15m-2005
	6,070,288	6,070,288					1,899,867	1,899,867	dem-BSA-o15m-2006
	6,318,714	6,318,714		762	762		1,802,620	1,802,620	dem-BSA-o15m-2007
	5,607,477	5,607,477					1,903,810	1,903,810	dem-BSA-o15m-2008
	7,077,410	7,077,410					4,014,331	4,014,331	dem-BSA-Total-2000
	7,486,878	7,486,878		8,796	8,796		2,705,025	2,705,025	dem-BSA-Total-2001
	8,780,365	8,780,365		734	734		2,401,709	2,401,709	dem-BSA-Total-2002
	10,191,015	10,191,015		19,680	19,680		1,966,787	1,966,787	dem-BSA-Total-2003
	8,659,961	8,659,961					2,176,626	2,176,626	dem-BSA-Total-2004
7,851,623	8,295,975	8,295,975				601,822	1,717,363	1,717,363	dem-BSA-Total-2005
5,993,824	6,479,758	6,479,758				1,374,115	1,922,962	1,922,962	dem-BSA-Total-2006
3,697,268	6,833,391	6,833,391		762	762	751,354	1,810,353	1,810,353	dem-BSA-Total-2007
3,493,663	6,160,474	6,160,474				1,553,684	1,911,703	1,911,703	dem-BSA-Total-2008

Table 4.2.5.1.2 (KWdays) by gear, member state and vessel size group Western Waters Area BSA

Area: BSA, o10t15m vessel lengths

			NonDeepTo	FRA		IRL		UK	
Gear	Year	Total	tal	Total	Excl. Deep	Total	Excl. Deep	Total	Excl. Deep
BEAM	2000	1,320	1,320			1,320	1,320		
BEAM	2001								
BEAM	2002								
BEAM	2003	147	147	147	147				
BEAM	2004	171	171	171	171				
BEAM	2005								
BEAM	2006								
BEAM	2007	150	150	150	150				
BEAM	2008								
OTTER	2000	197,249	197,249			197,249	197,249		
OTTER	2001	205,627	205,627	1,083	1,083	204,544	204,544		
OTTER	2002	249,510	249,510			249,510	249,510		
OTTER	2003	334,441	334,441	3,637	3,637	330,617	330,617	187	187
OTTER	2004	333,523	333,523	828	828	332,695	332,695		
OTTER	2005	304,902	304,902	3,173	3,173	301,729	301,729		
OTTER	2006	332,608	332,608	163	163	332,445	332,445		
OTTER	2007	427,186	427,186	569	569	426,291	426,291	326	326
OTTER	2008	431,432	431,432	3,241	3,241	427,723	427,723	468	468
DEM_SEINE	2000								
DEM_SEINE	2001	1,888	1,888			1,888	1,888		
DEM_SEINE	2002	1,888	1,888			1,888	1,888		
DEM_SEINE	2003	4,953	4,953			4,953	4,953		
DEM_SEINE	2004	804	804			804	804		
DEM_SEINE	2005								
DEM_SEINE	2006								
DEM_SEINE	2007								
DEM_SEINE	2008								
LONGLINE	2000								
LONGLINE	2001								
LONGLINE	2002								
LONGLINE	2003	9,278	9,278	9,278	9,278				
LONGLINE	2004								
LONGLINE	2005	436	436			436	436		
LONGLINE	2006	362	362			251	251	111	111
LONGLINE	2007	5,757	5,757			5,757	5,757		
LONGLINE	2008	11,421	11,421			11,421	11,421		
GILL	2000	67,075	67,075			60,425	60,425	6,650	6,650
GILL	2001	42,475	42,475			38,606	38,606	3,869	3,869
GILL	2002	48,531	48,531			38,941	38,941	9,590	9,590
GILL	2003	79,412	79,412			52,458	52,458	26,954	26,954
GILL	2004	87,003	87,003	748	748	59,618	59,618	26,637	26,637
GILL	2005	72,293	72,293			56,284	56,284	16,009	16,009
GILL	2006	93,641	93,641			72,636	72,636	21,005	21,005
GILL	2007	83,682	83,682			77,548	77,548	6,134	6,134
GILL	2008	111,803	111,803	116	116	104,672	104,672	7,015	7,015
TRAMMEL	2000								
TRAMMEL	2001								
TRAMMEL	2002								
TRAMMEL	2003	160	160			160	160		
TRAMMEL	2004								
TRAMMEL	2005	3,400	3,400	1,350	1,350			2,050	2,050
TRAMMEL	2006	11,391	11,391	5,274	5,274	4,138	4,138	1,979	1,979
TRAMMEL	2007	8,656	8,656	2,302	2,302	5,081	5,081	1,273	1,273
TRAMMEL	2008	30,759	30,759	21,168	21,168	9,181	9,181	410	410

Area: BSA, o15m vessel lengths

Gear	Year	Total	NonDeepTotal	BEL Total	BEL Excl. Deep	GER Total	GER Excl. Deep	FRA Total	FRA Excl. Deep	IRL Total	IRL Excl. Deep	NED Total	NED Excl. Deep	UK Total	UK Excl. Deep
BEAM	2000	2,658,929	2,658,929							2,476,553	2,476,553			182,376	182,376
BEAM	2001	2,570,272	2,570,272							2,446,989	2,446,989			123,283	123,283
BEAM	2002	2,566,257	2,566,257							2,493,468	2,493,468			72,789	72,789
BEAM	2003	3,137,232	3,137,232	46,929	46,929			460	460	2,961,485	2,961,485			128,358	128,358
BEAM	2004	2,131,998	2,131,998	17,947	17,947					1,987,752	1,987,752			126,299	126,299
BEAM	2005	2,501,818	2,501,818	37,446	37,446					2,339,381	2,339,381			124,991	124,991
BEAM	2006	1,561,314	1,561,314	12,090	12,090			219	219	1,422,400	1,422,400			126,605	126,605
BEAM	2007	1,163,445	1,163,445	7,104	7,104			81	81	1,145,248	1,145,248			11,012	11,012
BEAM	2008	702,574	702,574	10,056	10,056					688,670	688,670			3,848	3,848
OTTER	2000	16,305,242	16,305,242					9,755,874	9,755,874	3,378,743	3,378,743			3,170,625	3,170,625
OTTER	2001	17,752,098	17,752,098					11,984,056	11,984,056	3,574,170	3,574,170	8,796	8,796	2,185,076	2,185,076
OTTER	2002	20,056,238	20,056,238					13,736,482	13,736,482	4,393,046	4,393,046	734	734	1,925,976	1,925,976
OTTER	2003	19,884,558	19,884,558	5,510	5,510			13,311,848	13,311,848	5,132,048	5,132,048	19,680	19,680	1,415,472	1,415,472
OTTER	2004	17,326,484	17,326,484					11,022,341	11,022,341	4,789,945	4,789,945			1,514,198	1,514,198
OTTER	2005	16,172,666	16,172,666	2,204	2,204			10,580,412	10,580,412	4,305,508	4,305,508			1,284,542	1,284,542
OTTER	2006	15,362,271	15,362,271	1,987	1,987			10,157,872	10,157,872	3,740,655	3,740,655			1,461,757	1,461,757
OTTER	2007	15,177,909	15,177,909	6,175	6,175			9,528,911	9,528,911	4,191,052	4,191,052			1,451,771	1,451,771
OTTER	2008	13,233,526	13,233,526					7,673,990	7,673,990	4,028,654	4,028,654			1,530,882	1,530,882
DEM_SEINE	2000	517,202	517,202							460,322	460,322			56,880	56,880
DEM_SEINE	2001	671,934	671,934							661,438	661,438			10,496	10,496
DEM_SEINE	2002	1,050,469	1,050,469							1,047,408	1,047,408			3,061	3,061
DEM_SEINE	2003	999,343	999,343							999,343	999,343				
DEM_SEINE	2004	886,298	886,298							886,298	886,298				
DEM_SEINE	2005	819,620	819,620							819,620	819,620				
DEM_SEINE	2006	610,877	610,877							610,316	610,316			561	561
DEM_SEINE	2007	578,956	578,956							578,194	578,194	762	762		
DEM_SEINE	2008	458,469	458,469							458,469	458,469				
LONGLINE	2000	78,221	78,221					25,852	25,852	28,314	28,314			24,055	24,055
LONGLINE	2001	76,812	76,812					44,258	44,258	22,068	22,068			10,486	10,486
LONGLINE	2002	94,991	94,991					30,890	30,890					64,101	64,101
LONGLINE	2003	78,126	78,126					11,592	11,592	6,421	6,421			60,113	60,113
LONGLINE	2004	40,247	40,247					6,560	6,560					33,687	33,687
LONGLINE	2005	77,052	77,052					2,223	2,223	21,511	21,511			53,318	53,318
LONGLINE	2006	130,041	130,041					47,294	47,294					82,747	82,747
LONGLINE	2007	112,800	112,800					2,207	2,207	2,330	2,330			108,263	108,263
LONGLINE	2008	240,546	240,546					34,932	34,932	699	699			204,915	204,915
GILL	2000	1,200,635	1,200,635			24,420	24,420	127,986	127,986	474,484	474,484			573,745	573,745
GILL	2001	1,357,601	1,357,601			5,404	5,404	447,092	447,092	533,290	533,290			371,815	371,815
GILL	2002	1,683,733	1,683,733			7,514	7,514	793,923	793,923	556,104	556,104			326,192	326,192
GILL	2003	1,783,129	1,783,129			32,698	32,698	723,534	723,534	703,530	703,530			323,367	323,367
GILL	2004	1,858,003	1,858,003			38,186	38,186	750,992	750,992	602,849	602,849			465,976	465,976
GILL	2005	1,604,489	1,604,489			18,512	18,512	904,196	904,196	451,506	451,506			230,275	230,275
GILL	2006	1,484,220	1,484,220					970,975	970,975	296,917	296,917			216,328	216,328
GILL	2007	1,855,882	1,855,882			4,862	4,862	1,240,841	1,240,841	383,386	383,386			226,793	226,793
GILL	2008	1,137,293	1,137,293					578,914	578,914	396,100	396,100			162,279	162,279
TRAMMEL	2000														
TRAMMEL	2001	3,885	3,885							3,885	3,885				
TRAMMEL	2002														
TRAMMEL	2003	17,392	17,392					5,056	5,056					12,336	12,336
TRAMMEL	2004	14,052	14,052					4,223	4,223					9,829	9,829
TRAMMEL	2005	13,402	13,402					7,224	7,224					6,178	6,178
TRAMMEL	2006	60,760	60,760					48,891	48,891					11,869	11,869
TRAMMEL	2007	61,038	61,038					37,753	37,753	18,504	18,504			4,781	4,781
TRAMMEL	2008	56,803	56,803					20,032	20,032	34,885	34,885			1,886	1,886

Area: BSA, All vessel lengths

Gear	Year	Total	NonDeepTotal	BEL Total	BEL Excl. Deep	GER Total	GER Excl. Deep	FRA Total	FRA Excl. Deep	IRL Total	IRL Excl. Deep	NED Total	NED Excl. Deep	UK Total	UK Excl. Deep
BEAM	2000	2,660,249	2,660,249							2,477,873	2,477,873			182,376	182,376
BEAM	2001	2,570,272	2,570,272							2,446,989	2,446,989			123,283	123,283
BEAM	2002	2,566,257	2,566,257							2,493,468	2,493,468			72,789	72,789
BEAM	2003	3,137,379	3,137,379	46,929	46,929			607	607	2,961,485	2,961,485			128,358	128,358
BEAM	2004	2,132,169	2,132,169	17,947	17,947			171	171	1,987,752	1,987,752			126,299	126,299
BEAM	2005	2,501,818	2,501,818	37,446	37,446					2,339,381	2,339,381			124,991	124,991
BEAM	2006	1,561,314	1,561,314	12,090	12,090			219	219	1,422,400	1,422,400			126,605	126,605
BEAM	2007	1,163,595	1,163,595	7,104	7,104			231	231	1,145,248	1,145,248			11,012	11,012
BEAM	2008	702,574	702,574	10,056	10,056					688,670	688,670			3,848	3,848
OTTER	2000	16,502,491	16,502,491					9,755,874	9,755,874	3,575,992	3,575,992			3,170,625	3,170,625
OTTER	2001	17,957,725	17,957,725					11,985,139	11,985,139	3,778,714	3,778,714	8,796	8,796	2,185,076	2,185,076
OTTER	2002	20,305,748	20,305,748					13,736,482	13,736,482	4,642,556	4,642,556	734	734	1,925,976	1,925,976
OTTER	2003	20,218,999	20,218,999	5,510	5,510			13,315,485	13,315,485	5,462,665	5,462,665	19,680	19,680	1,415,659	1,415,659
OTTER	2004	17,660,007	17,660,007					11,023,169	11,023,169	5,122,640	5,122,640			1,514,198	1,514,198
OTTER	2005	16,477,568	16,477,568	2,204	2,204			10,583,585	10,583,585	4,607,237	4,607,237			1,284,542	1,284,542
OTTER	2006	15,694,879	15,694,879	1,987	1,987			10,158,035	10,158,035	4,073,100	4,073,100			1,461,757	1,461,757
OTTER	2007	15,605,095	15,605,095	6,175	6,175			9,529,480	9,529,480	4,617,343	4,617,343			1,452,097	1,452,097
OTTER	2008	13,664,958	13,664,958					7,677,231	7,677,231	4,456,377	4,456,377			1,531,350	1,531,350
DEM_SEINE	2000	517,202	517,202							460,322	460,322			56,880	56,880
DEM_SEINE	2001	673,822	673,822							663,326	663,326			10,496	10,496
DEM_SEINE	2002	1,052,357	1,052,357							1,049,296	1,049,296			3,061	3,061
DEM_SEINE	2003	1,004,296	1,004,296							1,004,296	1,004,296				
DEM_SEINE	2004	887,102	887,102							887,102	887,102				
DEM_SEINE	2005	819,620	819,620							819,620	819,620				
DEM_SEINE	2006	610,877	610,877							610,316	610,316			561	561
DEM_SEINE	2007	578,956	578,956							578,194	578,194	762	762		
DEM_SEINE	2008	458,469	458,469							458,469	458,469				
LONGLINE	2000	78,221	78,221					25,852	25,852	28,314	28,314			24,055	24,055
LONGLINE	2001	76,812	76,812					44,258	44,258	22,068	22,068			10,486	10,486
LONGLINE	2002	94,991	94,991					30,890	30,890					64,101	64,101
LONGLINE	2003	87,404	87,404					20,870	20,870	6,421	6,421			60,113	60,113
LONGLINE	2004	40,247	40,247					6,560	6,560					33,687	33,687
LONGLINE	2005	77,488	77,488					2,223	2,223	21,947	21,947			53,318	53,318
LONGLINE	2006	130,403	130,403					47,294	47,294	251	251			82,858	82,858
LONGLINE	2007	118,557	118,557					2,207	2,207	8,087	8,087			108,263	108,263
LONGLINE	2008	251,967	251,967					34,932	34,932	12,120	12,120			204,915	204,915
GILL	2000	1,267,710	1,267,710			24,420	24,420	127,986	127,986	534,909	534,909			580,395	580,395
GILL	2001	1,400,076	1,400,076			5,404	5,404	447,092	447,092	571,896	571,896			375,684	375,684
GILL	2002	1,732,264	1,732,264			7,514	7,514	793,923	793,923	595,045	595,045			335,782	335,782
GILL	2003	1,862,541	1,862,541			32,698	32,698	723,534	723,534	755,988	755,988			350,321	350,321
GILL	2004	1,945,006	1,945,006			38,186	38,186	751,740	751,740	662,467	662,467			492,613	492,613
GILL	2005	1,676,782	1,676,782			18,512	18,512	904,196	904,196	507,790	507,790			246,284	246,284
GILL	2006	1,577,861	1,577,861					970,975	970,975	369,553	369,553			237,333	237,333
GILL	2007	1,939,564	1,939,564			4,862	4,862	1,240,841	1,240,841	460,934	460,934			232,927	232,927
GILL	2008	1,249,096	1,249,096					579,030	579,030	500,772	500,772			169,294	169,294
TRAMMEL	2000														
TRAMMEL	2001	3,885	3,885							3,885	3,885				
TRAMMEL	2002														
TRAMMEL	2003	17,552	17,552					5,056	5,056	160	160			12,336	12,336
TRAMMEL	2004	14,052	14,052					4,223	4,223					9,829	9,829
TRAMMEL	2005	16,802	16,802					8,574	8,574					8,228	8,228
TRAMMEL	2006	72,151	72,151					54,165	54,165	4,138	4,138			13,848	13,848
TRAMMEL	2007	69,694	69,694					40,055	40,055	23,585	23,585			6,054	6,054
TRAMMEL	2008	87,562	87,562					41,200	41,200	44,066	44,066			2,296	2,296

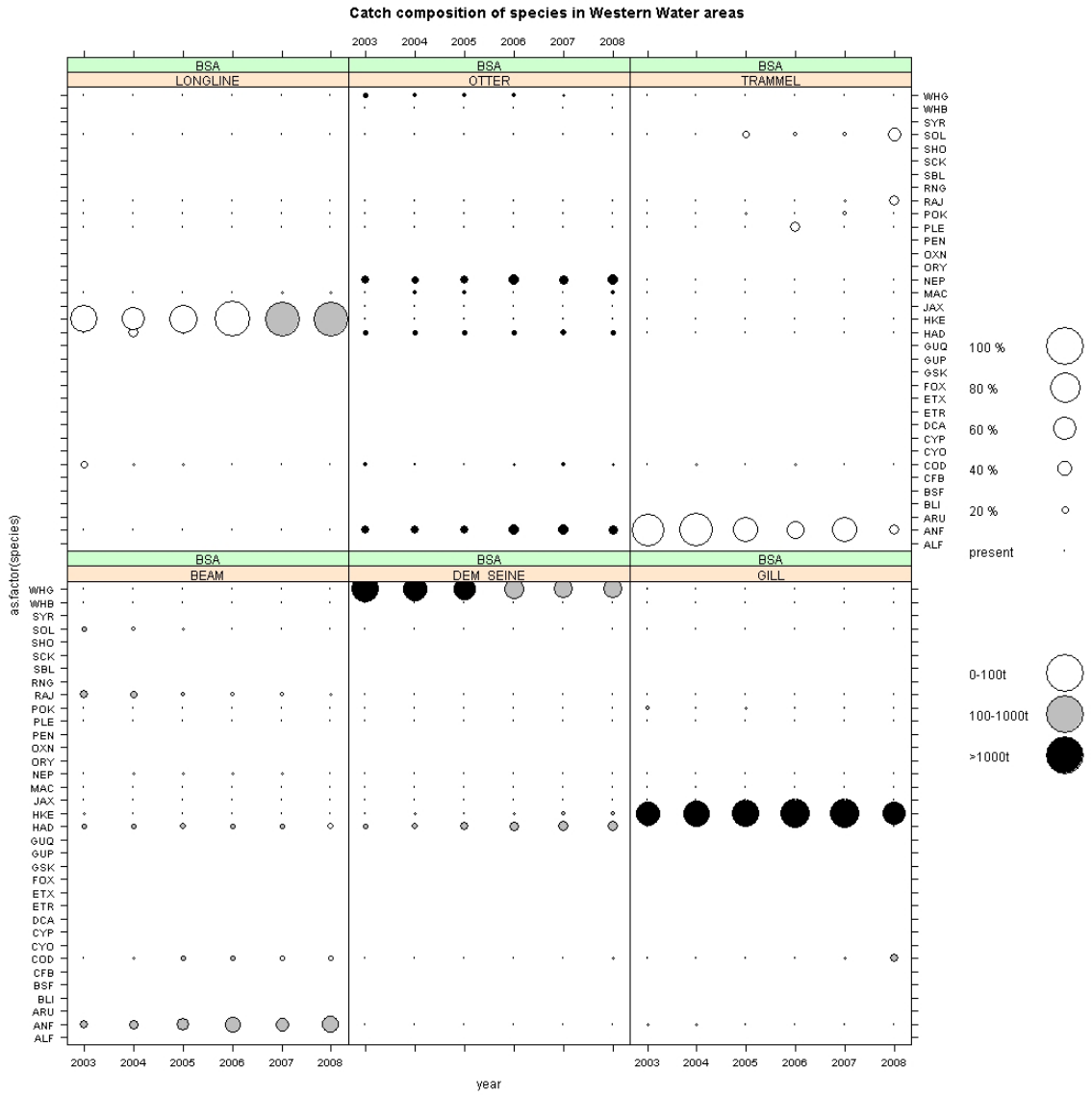

Figure 4.2.5.1.1 Catch composition by gear (countries combined) Western waters area BSA. Size of circles represents relative contribution to catch, shading indicates quantity.

4.2.5.2. Scallops

The small amounts of scallop effort in the BSA were confined to France, Ireland and UK. Ireland utilised the most effort.

Table 4.2.5.2.1 Scallop Effort (KWdays) by member state and vessel size group Western Waters Area BSA

Area: BSA, scallop effort

			FRA		IRL		UK	
			31039		109,395		1,223	
Length	Year	Total	Reported	Total	Reported	Total	Reported	Total
o10t15m	2000	505				505		
o10t15m	2001	14,956				14,758		198
o10t15m	2002	9,694		4,176		5,518		
o10t15m	2003	20,104		341		19,763		
o10t15m	2004	16,196		26		16,170		
o10t15m	2005	3,064		378		2,686		
o10t15m	2006	5,259		22		5,237		
o10t15m	2007	7,968		1,343		6,625		
o10t15m	2008	16,757		120		16,637		
o15m	2000	162,924		208		162,716		
o15m	2001	91,984				91,984		
o15m	2002	15,604		1,798		13,806		
o15m	2003	133,607				129,450		4,157
o15m	2004	99,528		4,597		94,931		
o15m	2005	102,957		378		102,579		
o15m	2006	42,174				42,174		
o15m	2007	48,545		280		48,265		
o15m	2008	66,610		1,262		59,969		5,379
Total	2000	163,429		208		163,221		
Total	2001	106,940				106,742		198
Total	2002	25,298		5,974		19,324		
Total	2003	153,711		341		149,213		4,157
Total	2004	115,724		4,623		111,101		
Total	2005	106,021	1,090	756	41,863	105,265		
Total	2006	47,433		22	35,486	47,411		
Total	2007	56,513		1,623	31,017	54,890		
Total	2008	83,367		1,382	42,441	76,606		5,379

4.2.5.3. Crab and spider crab

Crab and spider crab effort was very limited and again Ireland was the country using the most.

Table 4.2.5.3.1 Crab Effort (KWdays) by member state and vessel size group Western Waters Area BSA

Area: BSA, crab effort

			GER		FRA		IRL		UK	
					84690		63,198		393	
Length	Year	Total	Reported	Total	Reported	Total	Reported	Total	Reported	Total
o10t15m	2000	66,103						66,103		
o10t15m	2001	76,572						76,572		
o10t15m	2002	88,680						88,680		
o10t15m	2003	35,996						35,996		
o10t15m	2004	23,370						23,326		44
o10t15m	2005	101,937						101,937		
o10t15m	2006	62,438						62,438		
o10t15m	2007	172,718						172,718		
o10t15m	2008	155,577						155,577		
o15m	2000	2,157						1,201		956
o15m	2001	1,074						1,074		
o15m	2002									
o15m	2003	2,871						2,871		
o15m	2004	2,022		441				1,581		
o15m	2005	671						671		
o15m	2006	14,577		6,464				7,945		168
o15m	2007	10,725		1,727				8,998		
o15m	2008	10,008						10,008		
Total	2000	68,260						67,304		956
Total	2001	77,646						77,646		
Total	2002	88,680						88,680		
Total	2003	38,867						38,867		
Total	2004	25,392		441				24,907		44
Total	2005	102,608			5,310		70,134	102,608		
Total	2006	77,015		6,464	5,610		43,207	70,383		168
Total	2007	183,443		1,727	1,175		78,774	181,716		
Total	2008	165,585			4,785		69,622	165,585		

4.2.5.4. Effort in BSA not associated with above categories

Effort not associated with demersal, scallop or crab categories (above) is shown in Table 4.2.5.4.1. Ireland and Netherlands recorded significant amounts. Smaller quantities were recorded by Germany and the UK.

Table 4.2.5.4.1 'None' Effort (KWdays) by member state and vessel size group Western Waters Area BSA

Area: BSA, none effort

			GER		FRA		IRL		NED		UK	
Length	Year	Total	Reported	Total	Reported	Total	Reported	Total	Reported	Total	Reported	Total
o10t15m	2000											
o10t15m	2001	448						448				
o10t15m	2002											
o10t15m	2003	1,960						1,960				
o10t15m	2004	2,650						2,650				
o10t15m	2005											
o10t15m	2006											
o10t15m	2007	1,060						1,060				
o10t15m	2008	4,063						4,063				
o15m	2000	2,858,850		332,939		3,312		1,079,314		1,074,997		368,288
o15m	2001	4,070,982		219,170		54,885		961,928		2,057,215		777,784
o15m	2002	2,068,413		201,377				853,193		478,739		535,104
o15m	2003	2,563,874		417,205		1,152		617,608		1,151,065		376,844
o15m	2004	4,197,444		461,106				1,012,289		1,633,095		1,090,954
o15m	2005	2,408,011		203,082				718,008		967,750		519,171
o15m	2006	2,160,790		59,606		6,936		616,579		1,211,930		265,739
o15m	2007	3,191,950		95,556				1,250,139		1,516,373		329,882
o15m	2008	3,385,693		221,226				1,120,785		1,560,452		483,230
Total	2000	2,858,850		332,939		3,312		1,079,314		1,074,997		368,288
Total	2001	4,071,430		219,170		54,885		962,376		2,057,215		777,784
Total	2002	2,068,413		201,377				853,193		478,739		535,104
Total	2003	2,565,834		417,205		1,152		619,568		1,151,065		376,844
Total	2004	4,200,094		461,106				1,014,939		1,633,095		1,090,954
Total	2005	2,408,011		203,082				718,008		967,750		519,171
Total	2006	2,160,790		59,606		6,936		616,579		1,211,930		265,739
Total	2007	3,193,010		95,556				1,251,199		1,516,373		329,882
Total	2008	3,389,756		221,226				1,124,848		1,560,452		483,230

4.2.5.1. Additional Terms of Reference Concerning the Western Waters Regime

Several additional terms of reference were tabled concerning aspects of the Western waters regime and its overlap with other regulations. There was, however, insufficient time to tackle these. Assuming that in future more complete and reliable datasets are made available a more informed consideration of some of these questions (e.g. concerning definition, overlaps with other regulations and the relationship with TAC development) could be carried out.

APPENDIX I. SGMOS-09-03, SGMOS-09-04 AND SGMOS-09-05 PARTICIPANTS LIST.

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APPENDIX II EXPERT DECLARATIONS

Declarations of invited experts are published on the STECF web site on https://stecf.jrc.ec.europa.eu/home together with the final report.

European Commission

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Abstract

STECF/SGMOS-09-05 was held in Barza d'Ispra (Italy), on 28 September - 2 October 2009. This section of the report covers the analyses in relation to Deep Sea and Western Waters access regimes and provides fleet specific trends in catch (including discards), nominal effort in order to advise on fleet specific impacts on stocks under multiannual management plans. STECF reviewed the report during its 2010 plenary meeting in July 2010.

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